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GEORGIA STATE COLLEGE
OF AGRICULTURE



REGISTER 1910-1911

ANNOUNCEMENTS
1911-1912

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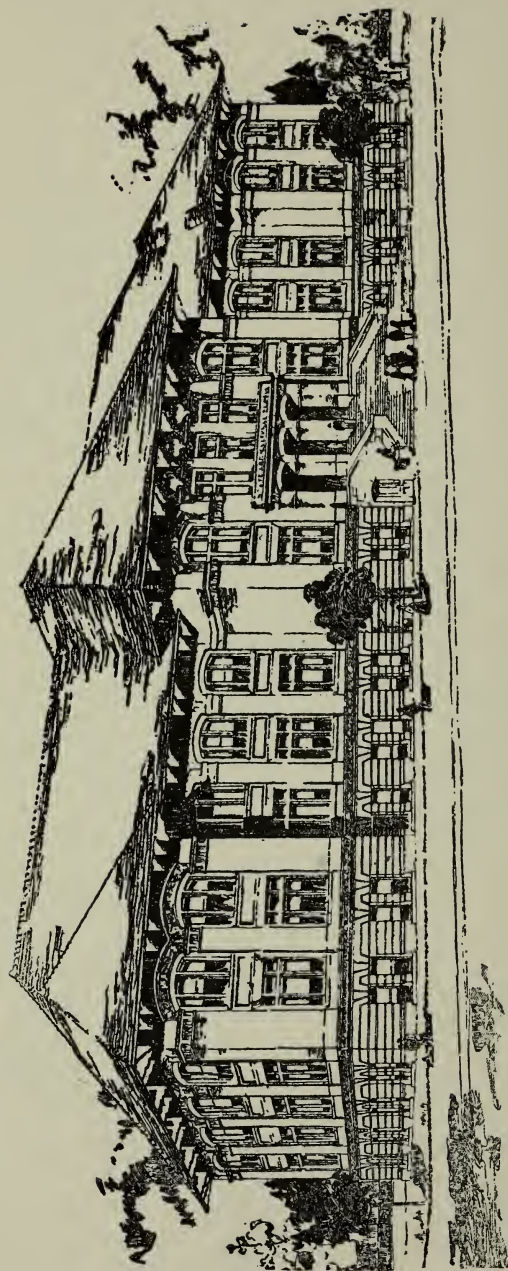
Announcement of

*The Georgia State College
of Agriculture*

For the Session of 1911-1912
With a Register of Officers and
Students for Session 1910-1911

ATHENS, GEORGIA

The McGregor Co.
Athens.



GEORGIA STATE COLLEGE OF AGRICULTURE.

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CALENDAR

| | |
|----------------------------|--|
| June 29, Thursday: | Opening of the Summer School. |
| Aug. 2, Wednesday: | Close of the Summer School. |
| September 16. | Meeting of the Faculty. |
| September 18: | First day of Registration. |
| September 18-21: | Examinations for Entrance. |
| September 20: | Opening of the First Term. |
| November 30: | Thanksgiving Day. |
| December 22: | Close of the First Term. |
| January 2: | Opening of the Second Term. |
| January 2: | Opening of the Cotton School. |
| January 19: | Birthday of General R. E. Lee. |
| February 20: | Exercises in commemoration of the 111th Anniversary of the Demosthenian Society and the 92nd Anniversary of the Phi Kappa Society. |
| February 22: | Washington's Birthday. |
| March 16: | Close of the Second Term. |
| March 18: | Opening of the Third Term. |
| April 21-27: | Encampment of Cadets. |
| May 20: | Last date for submission of prize essays. |
| June 10: | Meeting of the Board of Visitors. |
| June 13: | Annual Session of the Board of Trustees. |
| June 12-14: | Examinations for entrance. |
| June 15, Saturday: | 8:30 P. M., Sophomore declamation contest. |
| June 16, Sunday: | 11:00 A. M., Baccalaureate Sermon. |
| June 17, Monday: | 10:30 A. M., Exercises of the undergraduates representing the branches of the Uni- versity. 4:00 P. M., Military exercises and drill. 8:30 P. M., Champion debate between the Phi Kappa and Demosthenian Societies. |
| June 18, Tuesday: | 10:30 A. M., Business meeting of the Alumni Society. 12 M., Oration before the Alumni Society. 4:30 P. M., Junior orations and delivery of Sophomore cup. |
| June 19, Wednesday: | Commencement Day. Close of the 112th annual session. |

THE GEORGIA STATE COLLEGE OF AGRICULTURE

HISTORICAL STATEMENT.

The Georgia State College of Agriculture was organized in accordance with the Act of the General Assembly of the State passed July 21st, 1906. This institution is an outgrowth of the State College of Agriculture and the Mechanic Arts, which was founded as a coördinate department of the University of Georgia on May 1, 1872, upon the transference of the funds arising from the sale of Georgia's interest in the landscrip to the Trustees of the University. Its further endowment was made possible from time to time by additional appropriations provided through the generosity of the federal government. The State, however, realizing that agriculture represented its principal industry, decided by legislative enactment to differentiate and endow the work of the Agricultural College in order that it might more fully serve the chief interest of all the people.

The preamble to the Conner Bill contains the following statement, which sets forth fully the reasons for enlarging the work of the State College of Agriculture along both educational and research lines: "Agriculture is the principal industry of the State, and the main source from which the material prosperity of the State must come. Experience has demonstrated the great value of agricultural education in permanently improving the soil, multiplying its yield and increasing the value of its products. There is a growing demand by the people of the State for agricultural education, and for the practical benefits of scientific research in this line, and for improved methods in farming." The law provides that the State College of Agriculture shall be under the direction of a separate Board of Trustees, consisting of eleven men, three selected from the Trustees of the University proper, three from the directors of the Georgia Experiment Station, including the Commissioner of Agriculture, and five from the State at large. The Board has the same functions and exercises the same authority as that of the trustees of similarly organized and coördinated divisions of the University, but is subject, in accordance with the provisions of the constitution of the State, to the general control of the University Trustees.

HENRY CLAY WHITE, Ph.D., Sc.D., D.C.L., LL.D., Professor of Chemistry, Terrell Professor of Agricultural Chemistry.

JOHN PENDLETON CAMPBELL, Ph.D., Professor of Biology.

CHARLES MORTON STRAHAN, C. and M.E., Professor of Civil Engineering.

JOHN HANSON THOMAS McPHERSON, Ph.D., Professor of History and Political Science.

CHARLES MERCER SNELLING, A.M., Professor of Mathematics.

JOHN MORRIS, A.M., Professor of English Language and German.

JOSEPH LUSTRAT, Bach ès Lett., Professor of Romance Languages.

ROBERT EMORY PARK, JR., A.M., Litt.D., Professor of Rhetoric and English Literature.

THOMAS JACKSON WOOFER, A.M., Ph.D., Professor of Philosophy and Education.

JOSEPH SPENCER STEWART, A.M., Professor of Secondary Education.

JOSEPH ALEXANDER ATKINS, 2nd Lieut. U. S. Infantry, Commandant of Cadets.

STEADMAN VINCENT SANFORD, A.B., Junior Professor of Rhetoric and English Literature.

LINVILLE LAURENTINE HENDREN, Ph.D., Professor of Physics and Astronomy.

JOHN MOORE READE, Ph.D., Professor of Botany.

ERNEST LEE GRIGGS, Associate Professor of Civil Engineering.

URIAH HAROLD DAVENPORT, B.S., Associate Professor of Electrical Engineering.

ROSWELL POWELL STEPHENS, Ph.D., Associate Professor of Mathematics.

HOMER VAN VALKENBURGH BLACK, Ph.D., Associate Professor of Chemistry.

ROBERT PRESTON BROOKS, B.A. (Oxon.) Adjunct Professor of Georgia History and Sociology.

WILLIAM OSCAR PAYNE, A.M., Associate Professor of History and Political Science.

MARION DERRELLE DuBOSE, A.M., Adjunct Professor of English Language and German.

SANDFORD MEDDICK SALYER, A.B., Instructor in Rhetoric and English Literature.

ROBERT SPENCER POND, Ph.D., Instructor in Mathematics.

ERALBERT TALMADGE MILLER, B.S.C.E., Instructor in Physics.

CHARLES HOLMES STONE, Student Assistant in Drawing.

GENERAL STATEMENT.

The Georgia State College of Agriculture constitutes an integral part of the University system, and while it has certain buildings, lands and equipment set aside for the special use of its corps of instructors and students, its work in general is closely associated with the University proper, so that agricultural students enjoy all the advantages which a great university system affords. These advantages include instruction, advice from the professors in other colleges, use of the general libraries and scientific laboratories, and membership in the various class and society organizations. This is most desirable, since classroom training is but a part of a man's education.

AGRICULTURAL HALL.

The new agricultural hall was dedicated on January 18th, 1909, with appropriate ceremonies. The building is 264 feet long by 72 feet wide, three stories in height, beautifully proportioned, and is, architecturally, a very pleasing structure. It is constructed of cream-colored pressed brick, Bedford limestone being used for the foundation, with terra cotta trimmings in designs symbolical of the purpose to which the building is devoted. The roof projects so as to form wide eaves and is covered with red tile. The building contains 60,000 square feet of floor space and is designed especially for instruction in agriculture and the prosecution of research work, the two ends to which it was dedicated. It contains sixty large rooms, and few buildings devoted to agricultural instruction afford better facilities for the work. Provision has been made for administration offices, and for suites of rooms containing offices, private laboratories, class rooms, and student laboratories for the departments of agronomy, animal husbandry, dairy husbandry, cotton industry, horticulture, forestry, farm mechanics, veterinary medicine, bacteriology, entomology, agricultural chemistry, and extension teaching in agriculture. Besides these several suites of rooms, there are four large class rooms, a library and reading room, and an auditorium with a seating capacity of four hundred. The building is heated by steam and lighted by electricity, and will have the necessary refrigerating apparatus for the manufacture of dairy products, and the investigation of plant and animal diseases.

It proves admirable quarters for the students of the State College of Agriculture and those charged with the conduct of its work, the lack of which in the past has been responsible in large measure for the failure of agricultural education to make greater progress.

THE CAMPUS.

The grounds of the College of Agriculture are situated about a half-mile from the present center of the University. The College building being situated upon the brow of a commanding hill, there are unusual advantages for landscape gardening and the making of a most beautiful campus about the College of Agriculture. This work is going rapidly on and soon there will be a large collection of specimen trees and shrubs about the building as well as model roads and walks. The campus affords marked advantages to those interested in landscape gardening and in studying the native trees of our State, as well as those imported from other countries.

THE LIBRARY.

The library occupies a large, well-lighted room on the main floor of the Agricultural Hall and is fully equipped with Library Bureau furniture. During the year a good beginning has been made in the collection of standard books on all Agricultural subjects and of reference books, including Government publications, stud, herd, and flock books of the leading Breeders' Associations, the New International Encyclopedia, and Standard Dictionary. An effort is being made to complete the files of Bulletins of the Agricultural Experiment Stations and of technical magazines.

About seventy Agricultural magazines, both monthlies and weeklies, and a number of the county dailies are received in the library and serve to keep the students in touch with the progress of events along the lines in which they are interested. As soon as possible volumes of the principal magazines will be bound and will form an important part of the reference collection.

The library is open for the use of the students from 9 till 6 on week days and books may be taken out for home use for a period of two weeks.

LABORATORIES.

The success of a course of instruction in agriculture will depend largely on the thoroughness and efficiency of the training provided in the various laboratories. Ample laboratory space has been provided, while the furnishings and equipment are of the latest design and the best that can be secured for the particular end in view. Below will be found a brief description of those laboratories which have been furnished and are ready for use at the present time.

AGRONOMY LABORATORIES.

Two laboratories, occupying the east end of the main floor, are used by the department of agronomy. One of these is furnished

with center and wall desks and laboratory tables for soil work. A complete equipment of soil tubes, shakers, centrifuges, water baths, and ovens has been provided so that each student may work out the problems assigned him independently. The apparatus is used in a series of experiments designed to give the student an insight into the physical and mechanical condition of the various types of soils occurring in the state.

The other laboratory is devoted to the study of farm crops, including seed testing, cereal judging, grasses and forage crops. It is provided with wall cases for specimens, and laboratory tables for the use of the students. Various kinds of seed racks and seed-testing apparatus constitute a part of the equipment. A sufficient supply of sieves, magnifiers, and microscopes are available for the prosecution of the various lines of work, and ample facilities are given all students who wish to specialize.

ANIMAL HUSBANDRY LABORATORIES.

In the College building about seven thousand feet of floor space has been set aside for laboratories to be used in theoretical and practical instruction in dairying. Sufficient funds have not been available to equip this department fully up to the present time, though enough apparatus has been secured to get the work well under way. In the butter-making laboratory there are various makes of separators, both hand and power, which not only give the student a knowledge of how to set up and operate centrifugal separators, but enable him to determine from actual tests the make, type, and capacity of machines that will best meet his individual needs, both for factory and farm dairies. So far this laboratory has been equipped more in the nature of a farm dairy than as a centralized creamery, and the churns and butter workers are of small capacity. Additional apparatus will have to be purchased next year, as the 46 men taking work in dairying the past year overtaxed the present equipment. Factory machines will be installed later.

The milk-testing laboratory is a well-lighted, spacious room, in which there are several models of Babcock testers, both hand and power design. The importance of a rapid and accurate means of determining the amount of butter fat in skim milk, whole milk, and cream has become duly recognized, and no one, either producer of milk, or manufacturer of butter and cheese, can successfully conduct his business without being familiar with this test. Various methods for determining the lactic acid content of milk are available, and the students are made thoroughly familiar with this important phase of successful dairying. In addition to the above tests, facilities are provided for instructon

in determining the solids not fat, as well as making curd tests.

In the cheese-making laboratory instruction will be given in making, storing, and selling the different American and Swiss cheeses. This laboratory will be ready for use next year.

In recent years, under prevailing market conditions, the necessity for sanitary, wholesome dairy products that will stand long storage and transportation by rail has increased to such an extent that the pasteurization of milk and cream has become one of the important branches of the dairy industry. For this reason a separate pasteurizing laboratory has been provided in the dairy department.

In the production of palatable, sanitary products which will command the highest prices on the open market, it is necessary that the producer have some means of controlling the temperature of the milk during different stages while it is being prepared for the consumer, or in the ripening, storing, and holding of the different dairy products. Ample refrigerators have been provided for conducting experimental work along these lines.

Herd, flock, and stud books of most of the leading breeders' associations have been secured, so that the students are familiarized with the different methods and forms of tabulating and keeping pedigrees. These books are used as a supplement to the work in animal breeding, in familiarizing students with the combinations of blood lines that have gone to produce the highest type of animal.

On the College farm several breeds of live stock are maintained. Accurate records of their feed and production are kept, and the various experiments in breeding and feeding supplement and verify the work given in the laboratory and class room.

HORTICULTURAL LABORATORIES.

There are three laboratories in this department. A student laboratory and a private laboratory are in the Agricultural College building, and the third, a spraying laboratory, is on the horticultural grounds, which are located about four hundred yards southeast of the building. The students' laboratories will accommodate about thirty men, and are fitted with the necessary apparatus. The private laboratory, containing a culture room, fume hoods, and other essential fixtures, is reserved for research work pertaining directly to horticulture. In the office of the department, which connects the student and private laboratory, is a vault for the safe keeping of records and other valuable papers. Besides the above, there is a barn and a tool-shed, which afford ample room for the storage of all implements necessary on a fruit farm.

COTTON INDUSTRY LABORATORY.

A systematic study of cotton fibre with a view to the improvement of the fibre and the increase in yield, depends upon laboratory facilities, and as the courses offered in the department of cotton industry will be largely laboratory courses, provision was made for every known facility for conducting the work. Possibly it will be some time before all apparatus incident to the work can be purchased, but the laboratory is fitted with strictly up-to-date equipment, and is in perfect working order. Ample facilities are offered for a study of the modern methods of bleaching and mercerization, and for experiments in dyeing the cotton fibre; for combing and mounting the different varieties of cotton in a comparative study of individual merit; for an investigation of the basis on which classification and grades of lint cotton depend; and for ascertaining the breaking strength of the individual fibres of all varieties and grades. For a study of the nature of cotton fibre the best and latest model student microscopes are used.

In connection with this department there is also a research laboratory to which graduate and special students have access. This laboratory was designed to work out problems of a more general nature as they arise in connection with the study of cotton breeding, the nature and causes of the loss in connection with milling cotton, and the like. Located as it is, in the centre of the cotton belt, it is believed that this laboratory will prove ideal for working out all problems connected with the South's greatest industry.

FARM MECHANICS LABORATORY.

The farm mechanics laboratory is located in the basement at the east end of the College building. It is equipped with twelve wood-working benches, two Barrus lathes, one a wood-turning lathe and the other a combination wood and iron turning lathe, six Buffalo Forge Co.'s latest improved forges, complete, with coal and water boxes, and all necessary forge tools. There is also a full equipment of agricultural machinery.

Each wood-working bench is fully equipped with chisels, mallet, hammer, saws, and all other tools necessary to give the student a full knowledge of their care and use.

In addition to the lathes in the wood-working department, there is a 20-inch band saw and a combination rip and cut-off saw table.

The lathes are the best that can be had for the purpose for which they are intended. A thorough course in wood turning will be given.

The forge work will consist of welding and tempering, and the course will be extended as far as possible.

Agricultural machinery will be fully studied, and the classes are required to take apart and assemble the different pieces that go to make up the machine or implement.

With the four Bostrom & Brady levelling sets in the laboratory the students are required to make surveys of different plats of ground for the determination of the best methods of tile drainage; also to run terraces, lines of levels along proposed roadways, and to plot the profiles and figure the proper grades with regard to the cuts and fills.

The laboratory has a full line of plumbing material, and the classes will be required to assemble and calk up a "lay-out."

VETERINARY SCIENCE LABORATORIES.

The laboratories of this Department consist of several large rooms occupying the west end of the main floor of the College building. A small room opens into each of the large laboratories, the arrangement being adequate to accommodate the classes in laboratory work and for the storage of the various materials necessary.

The laboratories are well lighted, have a north exposure admirably suited to microscopic work, and are supplied with water, gas, and electricity.

The histological and pathological laboratory is furnished with double biological desks which are fitted with drawers and compartments for microscopes and other instruments and accessories used by the students in the work of these courses. Microtomes, a Naples Water Bath, mounting media, stains and reagents, with the necessary equipment of glassware are supplied for the use of students. A large wall cabinet in this room contains an exhibit of specimens and models of diseased organs and parts.

A steel enameled instrument cabinet with a fine equipment of surgical instruments occupies a corner of the private laboratory.

A small room in the suite is fitted up as a pharmacy. Here is found a large stock of drugs and medicines used in veterinary practice, together with an equipment of percolators, filters, mortars and pestles, scales, pill tiles, etc., for the study of *Materia Medica* and Pharmacy. A case of specimens of nearly two hundred crude drugs is also a part of the equipment.

The bacteriological laboratory devoted to the study of disease producing germs is fitted with biological desks, wall cabinet, wall desk, and cabinet of microscopic slides. This laboratory is equipped with high power microscopes with the best oil immersion

lenses, hot water bath, steam pressure sterilizer, hot air sterilizer, incubator, culture media and all necessary accessories.

The small room connected with this laboratory is so constructed that it is free from draughts of air and temperature variations are reduced to a minimum. This is used as an incubator room and is fully equipped.

In connection with the study of bacteriology the manufacture of hog cholera serum will be undertaken provided the Legislature makes provision for the necessary expenses. The student will be taught the process of manufacture of this valuable serum and instructed concerning its use in the prevention and cure of outbreaks of hog cholera. The hog industry is receiving more attention in Georgia now than in the past and this instruction and work will be very valuable to the farmers of the state.

An equipment of skeletons, models and charts of farm animals are used to illustrate the studies of anatomy during the warmer months.

THE VETERINARY HOSPITAL.

The veterinary hospital recently built is provided with box stalls for sick animals, bath stall, clinic room, operating room, dissecting room, office and dispensary, and room for attendant. A complete equipment of hobbles, side lines, slings, casting harness and operating tables is provided together with dental, operating and obstetrical instruments and appliances. Clinics at which sick or injured animals are treated free of charge are held at stated periods throughout the school year, and students are trained in the diagnosis and treatment of diseased animals and are required to prepare and administer medicines by the various methods. Especial attention is paid to instruction in the care of sick and injured animals, and the hygienic conditions which should surround them. A score card system of examination of animals for diseases, unsoundness and blemishes is used.

The dissecting room is used during the colder months in the study of anatomy and physiology. Students are required to dissect and study the various parts of farm animals and to observe the location of the internal organs and the principal blood vessels, nerves and other structures.

AGRICULTURAL CHEMISTRY LABORATORIES.

The courses of instruction offered in this department are designed to prepare students for practical work. Well-equipped laboratories are necessary that this may be done.

The laboratories occupy the west end of the top floor of the

College building, the main laboratory being well ventilated and lighted from three sides. These laboratories are equipped with new and modern desks, hoods, tables for microscopic work, and apparatus, accommodating sixty to seventy-five students. Adjoining the main laboratory is a well-lighted balance room equipped with the most accurate balances.

Adjoining the instructor's office is a private laboratory separated from the main laboratory by the store room which opens into both laboratories. This laboratory is equipped for the analysis of soils, feeds, fertilizers, waters, etc.

Each desk in the laboratory is supplied with gas, water and sinks. Ample facilities are offered for students specializing in the different branches of analytical work, such as soils, feeds, and other agricultural products.

The library is supplied with a number of the best reference books on chemical subjects.

THE COLLEGE FARM.

Contiguous to the building and extending in the rear for more than a mile lies the College farm, consisting of 830 acres. This land is varied in character; some of it is rough and broken, while other sections are fairly level; portions are well wooded, and a diversity of soils are met with. This is not objectionable from one point of view, as it will enable tests to be made which will be applicable to the types of soil found in many sections of the State.

For a number of years a large part of the land has been rented and handled in a very careless manner. No crop rotation has been followed, and very little live stock has been kept on the farm. As a result, the land is badly eroded in many places, and in poor physical condition. Winter and summer legumes are now being grown for the purpose of adding nitrogen and humus to the soil. Attention is being given to the construction of terraces and drains, and much loose stone and trash has already been removed from the land. While these operations are costly, they form an excellent object lesson for students in the reclaiming of exhausted soils, and it is only a question of time when the farm will be put on a highly satisfactory basis from both a physical and a financial standpoint.

The farm has been accurately surveyed and mapped; first with the idea of beautifying it as fast as funds become available by laying out the necessary roads and walks and locating such additional buildings as will be required from time to time with due regard to desirable landscape effects; and second, by the U. S.

Department of Agriculture, so that all the soil types found might be defined and their physical characters ascertained. Thus when experiments are undertaken combining a physical and chemical study of the soils, results of accuracy and value may be expected.

THE COLLEGE BARN.

The funds available for the erection of barns were so limited that these structures have been made very plain, though substantial. As the cost of these buildings is low, they can be copied advantageously by any farmer, a consideration of much practical importance. The dairy barn is 40x70 feet, and contains stalls for thirty cows and seven horses, besides two box stalls. There is also an office, a milk room and a boiler house. A 135-ton silo is connected with the barn by a feed-mixing and weighing room, and there is ample space for the storage of rough feed. A bull house, the necessary paddocks for young stock, a blacksmith shop, machine shed, and individual hog houses have also been erected near the dairy barn.

During the past year a beginning was made at erecting the main stock barn on the College farm. However, only a sufficient amount of money was available for building, and partially completing the storage space of this barn. The part which has been erected is of the most modern construction, and nothing but the best material has been used. It is 40x120 feet, and 40 feet high. An office, bed-room, and storage room have been provided on the first floor, and the remainder of this floor will be used for grain and feed bins, and a mixing and grinding room. The entire second story is for roughage, and has a capacity of 500 tons of loose hay. This barn, when completed, will represent an investment of approximately \$10,000, and the herds have grown to such size that it will have to be completed within the next year.

LIVE STOCK.

The Dairy Herds.

The establishment of herds and flocks is an expensive undertaking, and the limited funds available made it necessary for the College to exercise care and discretion in the organization of this feature of the work. Substantial progress is being made, however. Eleven pure bred Jersey females and one bull are now owned by the College, and in addition there are forty grade Jerseys in the herd. The Holstein herd consists of one bull, eight pure bred females, and five grade heifers. There are twenty heifers that will soon be in milk and will be used for either enlarging the herd or replacing the more inferior aged cows.

The Beef Herd.

A considerable portion of the College farm is in a depleted and worn condition. Sufficient funds have not been available for rapidly improving this abandoned land. For the present it is being utilized as a beef ranch. The herd consists of 30 high grade Herefords and one registered Hereford bull. This affords a valuable object lesson in utilizing the unoccupied land, as well as affording representatives of the beef type for stock judging with the students.

The Hog Herds.

A herd of pure bred Tamworths (representatives of the extreme bacon type of hog), and Berkshires are maintained on the farm. Experiments in cross-breeding are now under way. Feeding trials are being made to determine the efficiency of various grazing crops and grain rations for producing pork cheaply.

Work Stock.

A total of 18 horses and mules are owned by the College farm. The mules are of superior quality and represent different types, including medium heavy plantation mules, sugar mules, and heavy draft mules. The stallion and breeding mares are also used as farm workers, and all of the stock is used for teaching work in stock judging. On account of this requirement, the department hopes to maintain a greater number of animals, and of more types than will be absolutely needed for farm work, and all of the herds should be increased rapidly.

Horse Breeding.

The stud consists of one pure bred Percheron stallion and three high grade Percheron mares, besides one draft filly and one trotting bred mare.

On account of the importance of this work, both from the standpoint of increasing the work stock on the College farm, and the beneficial demonstration for the students, and the farmers of the state, the work in this department will be prosecuted as rapidly as funds will permit.

THE DEMONSTRATION FIELD.

A field of twenty acres has been set aside for experimental work. This area of land has been subdivided into more than 1,000 plats, ranging in size from $\frac{1}{60}$ to $\frac{1}{10}$ of an acre. Through the medium of this experimental field Nature is constantly being asked questions, and new facts of interest are being brought to light by actual field tests; the value of principles and theories developed

through laboratory research is determined, and thus the education of the student is made more perfect and complete, since he not only receives instruction in theory in the class room, but has the underlying scientific principles fully demonstrated to him in the laboratory, and sees the actual results which follow the application of these principles in farm practice.

Much attention will be given in the demonstration field to the development of strains of cotton, corn, and other farm crops of better quality than those ordinarily grown. The relation of fertilizers to crop production, the influence of various methods of cultivation, the value of crop rotations, and the merits of new and interesting varieties of farm crops will be fully tested, and not only will they be made a part of the knowledge of the student body, but the results will be prepared in pamphlet form and distributed free of cost to the farmers of the state. This feature of the work will thus be made to serve several useful and important economic purposes, as well as providing a definite type of information for agricultural students.

In connection with the department of cotton industry, there will be special plats set aside for conducting experiments in cotton breeding, both by selection and hybridization, and students will be given opportunity to see the results of their own experiments. There will also be arranged a variety test of all the leading varieties of cotton, and during the growing and harvesting seasons students will be required to write full descriptions of varieties, in order that they may be able to distinguish one variety from another, and at the same time acquire the habit of studying the cotton plant.

ORCHARDS AND GARDENS.

About thirty-five acres of the College farm have been set aside for horticultural purposes. The land is rolling, and, with the exception of one or two acres of sand, which will serve well for truck crops, the soil is red clay. The field has been plotted and a variety orchard planted, in which all the varieties of apples, pears, peaches, plums and other fruits recommended for this section are well represented, so that a comparative study of their qualities can be easily made. As rapidly as funds will permit, a truck garden will be brought into shape, experimental plats laid out, a commercial orchard started. A plantation of small fruits is already well established. For the benefit of the fruit growers at large the horticultural grounds will serve as a testing field for all new varieties and also as a laboratory in which to experiment upon and demonstrate to the students all practices of orchard and garden management.

THE AGRICULTURAL CLUB.

The students of the College have an organization of their own, known as the Agricultural Club, which meets every two weeks for the discussion of various agricultural topics. The purpose of the society is to obtain drill in parliamentary practice and in declamation and debate, as well as to discuss the scientific and practical phases of many important agricultural problems. The club publishes a Quarterly, which is not only distributed quite widely among the student body, but is circulated over the state. This publication forms a desirable medium of communication between the students and the farmers, and furnishes useful literary training to the students as well.

FEES AND EXPENSES.

Attention is called to the remarkably low cost for which a man may take a full collegiate year in the college. By rooming in the dormitories a young man can live at the University almost as cheaply as at home. This should encourage a large number of young men to avail themselves of the special advantages which the four-years course or the one-year course will confer upon them.

The expenses are as follows:

Room rent in College dormitories, \$2.50 per month. This includes electric lights, heavy furniture, and care of room. The students provide fuel, mattress, bed furnishings, and toilet articles. Board in Denmark Dining Hall costs \$9.00 a month on the coöperative plan. Room rent and board are paid monthly. Furnished rooms in private families may be secured for from \$2.50 to \$5.00 a month for each occupant.

Laundry will cost about \$1.25 a month and books about \$10.00 a year. All students are required to join one of the literary societies, the initiation fee being \$2.00.

Uniform for the military department will cost about \$16.00. This will last two or three years.

In short, the necessary expenses of a student for the college year of nine months need not exceed \$150.00.

Expenses for short term students are in proportion to those for long course students. The cost of attending the Cotton School will vary from \$15.00 to \$25.00, due chiefly to the variation in railroad fare.

PUBLICATIONS.

The Georgia State College of Agriculture through its extension department publishes circulars of information on pertinent topics from time to time. These circulars are distributed free of cost

to farmers residing in the State. A series of educational bulletins is now in course of preparation, and at least four will be distributed during the year. These will summarize in a practical manner the results of investigations, for example, with cotton and corn, and will prove especially valuable for reference to all progressive farmers. It is expected that this series will be developed from year to year until eventually a first-class reading course and farmers' library will be the result. Press bulletins are also sent out each month to all the papers of the State. Thus the College is taking an active part in endeavoring to disseminate the vast fund of useful information which has accumulated as a result of the researches of the agricultural colleges and experiment stations within the last few years.

PRIZES AND SCHOLARSHIPS.

Through the generosity of the various friends of agricultural education the following scholarships and prizes have been offered to students. The coöperation of the good friends who have made it possible to offer these prizes is heartily appreciated.

LIST OF PRIZES

Awarded at Commencement, 1911.

Junior Scholarship, \$50.00 in gold, given by the Virginia-Carolina Chemical Co., Richmond, Va., to the student showing the greatest proficiency in all agricultural subjects for the College year 1910-11.

Sophomore Scholarship, \$40.00 in gold, given by the Virginia-Carolina Chemical Co., to the student showing the greatest proficiency in all agricultural subjects for the College year 1910-11.

Freshman Scholarship, \$25.00 in gold, given by the Virginia-Carolina Chemical Co., to the student showing the greatest proficiency in all agricultural subjects during the College year 1910-11.

One year agricultural course, \$25.00 in gold, given by Virginia-Carolina Chemical Co., to the student showing the greatest proficiency in all agricultural subjects for the College year 1910-11.

\$25.00 in gold, given by the Board of Trustees to the student writing the best essay on "The Benefits which the Experiment Stations have conferred on Southern Agriculture."

\$50.00 in gold, given by the Empire State Chemical Co., Athens, Ga., to be divided into three prizes of \$25.00, \$15.00 and \$10.00 respectively for the best essays on "The Use and Application of Commercial Fertilizers."

\$10.00 in gold, given by the DeLaval Separator Co., New York,

N. Y., to the student showing the greatest proficiency in the handling of cream separators.

One Silver Cup, given by T. W. Wood & Sons, Richmond, Va., to the student in the one-year course writing the best essay on "Farm Crops."

\$10.00 in gold, given by H. G. Hastings & Co., Atlanta, Ga., to the student writing the best essay on "The Relation of Soil Improvement to Crop Production."

\$10.00 in gold, given by H. G. Hastings & Co., Atlanta, Ga., to the student writing the best essay on "The Influence of Seed Selection on Increased Yields."

Besides the above, prizes of \$300.00, \$200.00, and \$100.00 respectively are offered by the E. I. DuPont Powder Company to the students of the colleges of agriculture in the several southern states who prepare and submit the best essays on "The Use of Explosives in Agriculture." For special information concerning this contest, see Prof. L. C. Hart.

Scholarships to the College of Agriculture have been offered by Hon. Asa G. Candier, H. G. Hastings & Co., and Congressman Gordon Lee. Others will be added from time to time. Those who contemplate entering the College and desire information relative to these matters should write to the President.

TERMS OF ADMISSION.

Four-years' Degree Course.—The requirements for admission to the four-years' course are similar to those for all other students entering the University.

A brief summary of these requirements is here given:

A study of English Grammar, Rhetoric and a number of English Classics, as Shakespeare, Milton, Tennyson, 3 units.

A study of Arithmetic, High School Algebra and Plane Geometry, 2½ units.

A study of two of the following history groups: Ancient History, English History, American History and Civics, Modern History, 2 units.

And 6½ units (of which three may be for agriculture), from the following: Elementary Physics, Physical Geography, Botany, Chemistry, Drawing, Agriculture, Physiology, Zoölogy, History, and a foreign language.

A study of a foreign language, either Latin, German, French, Spanish or Greek, 2 or more units.

This makes a total of fourteen units for full admission to the Freshman class. No student will be admitted with less than 10 of these units, the other 4 units being made up later in the course by outside study or extra studies.

For full outline of entrance studies, the student is referred to the General Catalogue of the University, or to the Principal of his school.

Students not less than eighteen years of age and not candidates for a degree may be admitted to the courses in Forest Engineering upon the recommendation of the professor in charge and the approval of the Entrance Committee.

Students from Accredited Schools will be admitted on a certificate from the principal covering the work done. On work not thus certified students must stand examinations to determine their qualification to carry forward college work. Students who enter the Agricultural College with ten units will be allowed to make up four units in the following manner:

In the Freshman class, Drawing one unit; Agriculture (Soils, Soil Fertility, and Feeds and Feeding in the one-year agricultural course) one unit.

Sophomore class, Physics 1, one unit; Physiography, one unit. If the student finds that he is not able to carry all the Sophomore year, he will be allowed to carry History over to the Junior year.

Special One-year Course.—Students 16 years of age and over are admitted to this course without examination, at the discretion of the executive officers of the College. They must, of course, have a good common school education in order to benefit by the instruction provided, and must be diligent and faithful in the prosecution of their studies. These are not candidates for degrees.

Three-Months' Course.—The three-months' course is an integral part of the one-year course, and so arranged as to permit farmers and farmers' boys 16 years of age and over to attend the College for a period of three months in the winter season when work is not pressing; and obtain a large amount of practical training based on correct scientific principles at a minimum cost. No entrance examinations are required for this course.

Farmers' Short Courses, Cotton School, etc.—These courses are open to any person over 16 years of age in the State, but are designed mainly for farmers of mature years who cannot spend more than ten days away from home during the winter season. The cost of these courses is reduced to a minimum and they are intensely practical in character.

CONFERENCE FOR FARMERS AND FARMERS' WIVES.

An annual conference is held during the month of January for the purpose of bringing the farmers and their wives more intimately into touch with the work of the College. The conference lasts for a week, and during that time a great variety of topics are discussed. The Farmers' Conference is a modified school, with

its work so adjusted as to give the busy farmer and his wife a pleasant holiday outing, and at the same time enable them to acquire information which will be of service to them throughout the year.

SELF-HELP.

It is the purpose of the College to encourage students to work as much of their time as possible for both economic and practical reasons. In this way the cost to the student may be reduced considerably, and his knowledge of how to apply scientific principles in farm practice may be materially broadened. It is both important and necessary that labor with the hands should be recognized as honorable and essential to the welfare of an agricultural people.

Students in the College of Agriculture have the same opportunities of securing help from the Charles McDonald Brown Scholarship Fund as those in other departments of the University at Athens. The interest on this fund is lent to worthy young men on condition that they obligate themselves to return it with four per cent. interest. Applications for scholarships should be made to the Chancellor of the University. A special circular of information concerning the fund and blank forms of application will be supplied on request. This fund makes it possible for many young men of limited means to take advantage of the opportunity which the College offers for securing an education.

OBJECTS OF THE COLLEGE.

The purpose and plan of the Agricultural College is, first to train agricultural students in the sciences pertaining to correct farm practice in order that they may receive a thorough and liberal education; second, to so arrange the course of instruction that men of limited means, opportunity, and education may receive the greatest practical benefit by attending courses of varying length provided for in the College; third, to take an active part in the dissemination of agricultural knowledge among the farmers of the State by means of extension teaching, farmers' institutes, and bulletins and publications of a popular and practical nature.

COURSES OF INSTRUCTION.

The four-years' course provides for a liberal and thorough training along scientific lines in agronomy, soil fertility, animal husbandry, dairy husbandry, horticulture, farm mechanics and cotton industry. General training in chemistry, physics, botany, biology, English and mathematics is also provided. Since the field of agricultural education is so broad that it is quite im-

possible for a student to pursue all the courses offered in four years, certain fundamental studies are prescribed, and the largest liberty of selection commensurate with the best interests of the student permitted. In this way the student is enabled to select a course which is more in keeping with his taste, and at the same time he can obtain sufficient special training to fit him better for the special line of work he desires to pursue upon graduation.

The one-year course is provided for men who have only a limited amount of time and money at their disposal, and who in many instances have not the fundamental training which would enable them to pursue a four-years' course of study advantageously. Men of this class, however, who desire to farm can improve their knowledge and ability to manage farm problems intelligently by pursuing this course at a moderate cost. Naturally, the training provided for in this course is of a more restricted and practical nature, as its character and intention make necessary.

The three-months' course and the ten-day courses and conferences are provided for those actually engaged in farming or interested directly or indirectly in it who desire to obtain the largest amount of practical knowledge which they can apply immediately and with profit, at a minimum of cost. These courses confer great benefits upon all who pursue them, and are to be commended particularly to men varying in age from 25 to 60 years who have not had the benefits of agricultural training in the past, and are therefore at a loss to know where to look for information and very often how to apply it successfully even after they have acquired it.

SPECIAL COURSE IN COTTON INDUSTRY.

The department of cotton industry is a newly organized department in the State College of Agriculture, and is designed to meet the special needs of a cotton-growing community. Students therefore, who are desirous of specializing in the work will have the opportunity of electing all the courses of instruction offered by the department, provided they select from allied subjects a sufficient amount of work to meet the University requirements. Two special courses of 30 days duration are offered in January and June to all who desire to specialize in cotton grading and related subjects.

DEGREE.

The degree of B.S. in Agriculture is conferred upon all students who successfully complete the four-years' course. An outline of the long course in agriculture follows, giving in detail such infor-

mation as students who desire to pursue it will find most helpful. Those desiring special information relative to any phase of the work prescribed below are invited to write to the College authorities for it.

BACHELOR OF SCIENCE IN AGRICULTURE.

Freshman.

| | |
|----------------------------|--------|
| Agronomy 1..... | 2 hrs. |
| Animal Husb. 1..... | 1 " |
| Farm Mch. 1, 2, 3 and 4, 3 | " |
| Horticulture 1, 2 and 3... | 3 " |
| English 1..... | 3 " |
| Chemistry 1..... | 3 " |
| Mathematics 1, or 2-3.... | 3 " |
| Military Science..... | 1 " |

 19 hrs.

Sophomore.

| | |
|----------------------------|--------|
| Animal Husb. 2, 3 | |
| 4 and 5..... | 4 hrs. |
| Botany 1..... | 3 " |
| Agri. Chemistry 1 and 2, 4 | " |
| History 2 or 4..... | 3 " |
| English 2..... | 3 " |
| Mathematics 2, 3, or 1.. | 3 " |
| Veterinary Medicine 1-2, 3 | " |

 23 hrs.

General Agriculture.

Junior.

| | |
|--------------------------|------|
| German 5, or French 5, 3 | hrs. |
| Agronomy 5, 6..... | 4 " |
| Agronomy 3, 4 } | 3 " |
| Farm Mch. 5 } | |
| Botany 2..... | 4 " |
| Physics 3 or 5..... | 3 " |

 17 hrs.

Elective..... 3 "

Senior.

| | |
|--------------------------|--------|
| German 6 or French 6.. | 3 hrs. |
| Animal Husb. 6, 7, 8.... | 3 " |
| Vet. Medicine 3-4..... | 3 " |
| Cotton Industry 4, 5.... | 3 " |
| Farm Mch. 7-8 } | |
| Forestry 3 } | 3 " |

 15 hrs.

Elective..... 6 "

Agronomy.

| | |
|--------------------------|--------|
| German 5 or French 5. . | 3 hrs. |
| Agronomy 5, 6..... | 4 " |
| Agronomy 3, 4 } | 3 " |
| Farm Mch. 6 } | |
| Cotton Industry 4, 5.... | 3 " |
| Physics 3 or 5..... | 3 " |

 16 hrs.

Elective..... 4 "

| | |
|------------------------|--------|
| German 6 or French 6.. | 3 hrs. |
| Agronomy 7..... | 4 " |
| Cotton Industry 7..... | 4 " |
| Farm Mch. 7-8 } | |
| Forestry 3 } | 3 " |

 14 hrs.

Elective..... 6 "

Animal Husbandry.

| | |
|--------------------------|--------|
| German 5 or French 5... | 3 hrs. |
| Animal Husb. 6, 7, 8.... | 3 " |
| Vet. Medicine 3-4..... | 3 " |
| Agronomy 5, 6..... | 4 " |
| Farm Mch. 6..... | 1 " |
| Physics 3 or 5..... | 3 " |

 17 hrs.

Elective..... 3 "

| | |
|--------------------------|--------|
| German 6 or French 6... | 3 hrs. |
| Animal Husb. 9-10-11-12, | 3 " |
| Animal Husb. (Dairying) | 3 " |
| Vet. Medicine 5-6..... | 3 " |
| Cotton Industry 6 } | |
| Forestry 3 } | 3 " |

 15 hrs.

Elective..... 6 "

Horticulture.

| | | | |
|---------------------------------------|---------|---------------------------|---------|
| German 5 or French 5... | 3 hrs. | German 6 or French 6... | 3 hrs. |
| Horticulture 4, 5, 6, 7, 8, 9..... | 6 " | Horticulture 10, 11, 12.. | 6 " |
| Agronomy 5, 6..... | 4 " | Cotton Industry 5..... | 1 " |
| Physics 3 or 5..... | 3 " | Farm Mch. 6..... | 1 " |
| | | Farm Mch. 7-8 } | 3 " |
| | | Forestry 3 } | |
| | 16 hrs. | | 14 hrs. |
| Elective..... | 4 " | Elective | 6 " |

Chemistry.

| | | | |
|--------------------------|---------|-------------------------|---------|
| German 5 or French 5... | 3 hrs. | German 6 or French 6... | 3 hrs. |
| Agri. Chemistry 2-3..... | 6 " | Agr. Chemistry 4..... | 6 " |
| Agronomy 3, 4..... | 2 " | Agronomy 5, 6..... | 4 " |
| Animal Husb. 6, 7, 8.... | 3 " | Cotton Industry 6 } | 3 " |
| Physics 3 or 5..... | 3 " | Geology } | |
| | 17 hrs. | | 16 hrs. |
| Elective..... | 3 " | Elective..... | 6 " |

Electives.

A student will be required to submit in writing to the head of the department from which his major is chosen his electives for the year for approval before registering. The electives may be selected from Junior or Senior subjects.

Note.—All laboratory periods count as one hour for two, and are included on that basis in the total number of hours required in each year.

In order to associate the agricultural students more intimately with the work of the College in the Freshman and Sophomore years, the mathematics formerly given in the Freshman year has been divided so that one-half is now taken in the Freshman and one-half in the Sophomore year. The language formerly required in the Freshman and Sophomore years has been moved to the Junior and Senior years. By this arrangement, training in certain agricultural subjects has been provided in both the Freshman and Sophomore years.

To permit of greater specialization on the part of students, groups of electives have been arranged for. By this means the students may pursue a more or less general course of instruction during the Junior and Senior years, or specialize in agronomy, animal husbandry, horticulture or agricultural chemistry. Students desiring to specialize will be required to elect a major group in the Junior year, and continue the study of the coördinated courses in the Senior year. Thesis work will be required for graduation, and must be associated with the major study elected in the Junior year. The work done on the thesis will not reduce the number of units required during the Senior year.

BACHELOR OF SCIENCE. (Forest Engineering).

The degree of Bachelor of Science in Forest Engineering is given upon the completion of the studies outlined below. These studies have been chosen for their cultural as well as their professional value.

It is probable that the strictly professional studies will in the future be made post-graduate work, leading to the degree of Forest Engineer (F. E.); but at present only the bachelor's degree is given.

| Freshman. | | Sophomore. | |
|---------------------------|-------|---------------------------|-------|
| | hrs. | | hrs. |
| Drawing, 6..... | 3 | Civil Engineering, 1..... | 3 |
| English, 2..... | 3 | Drawing, 7, 8..... | 2 |
| History, 1..... | 3 | English, 2..... | 3 |
| Mathematics, 1, 2, 3..... | 6 | Mathematics, 4, 6..... | 4 |
| Physics, 5..... | 4 | Botany, 1..... | 4 |
| | | Forestry, 4..... | 3 |
| | <hr/> | | <hr/> |
| | 19 | | 19 |
| Junior. | | Senior. | |
| | hrs. | | hrs. |
| Chemistry, 2..... | 4 | Geology, 1..... | 1½ |
| Selected parts of Civil | | Economics, 11, 12..... | 3 |
| Engineering, 2, 3..... | 4 | Botany, 3..... | 1½ |
| Drawing, 9..... | 2 | Forestry, 5..... | 2 |
| Botany, 2..... | 4 | “ 6..... | 2 |
| Zoölogy, 2..... | 4 | “ 7..... | 2 |
| Forestry, 5..... | 3 | “ 8..... | 4 |
| | | “ 9..... | 2 |
| | <hr/> | | <hr/> |
| | 21 | | 18 |

Note.—Candidates for this degree who do not offer two units in foreign language at entrance, must take a foreign language in the Freshman and Sophomore years in addition to the scheduled work.

AGRONOMY.

John R. Fain, Professor.

P. O. Vanatter, Instructor.

1. **Cereals.** The cereals studied include wheat, corn, oats, barley, rye and rice; sorghum, millet and buckwheat are studied briefly, in so far as the grains are used for food. The study of these cereals includes the origin, history, composition, cultivation, and methods of improvement. In addition to text-book work, the cereals are grown in nursery rows convenient to the College, so that the student may study the plants first hand. The demonstration field is also used for the same purpose. Two hours. Second and third term. Freshman.

2. **Cereal Judging.** This is a laboratory course. The study begins with the seed, and is followed up by the study of the mature plant, and its relation to seed production. A part of this work is in the field, and in the demonstration barn, so that the student is taught not only the various facts in regard to the development of the cereals, but forms the habit of studying these plants in the field. The demonstration field, and cereals grown in nursery rows form excellent facilities for this work. The germination of corn is given especial attention, and the records in the demonstration field are used in this connection, showing the relationship between the germination growth of the various varieties tested. One laboratory period. Second and third term. *Freshman.*

3. **Farm Management.** Factors entering into the business of farming, and maintaining farm lands are studied in their relation to each other, and to their proper influence on farm practice. Special attention is paid to ways of systematizing the business, and methods of maintaining the crop production of the land. In this connection a detailed study is made of rotation as adapted to Georgia conditions. Laying out the farm, methods of cropping, and records are studied. The cost of production and marketing is given special attention. In the laboratory work the various lines of farming carried on in the state, and in the various sections of the United States are studied and various farm problems are dealt with. The student will be required to read "Rural Wealth and Welfare," by Fairchild, and "Agricultural Economics," by Taylor. Two lectures, and one laboratory period. First Term. *Junior.*

4. **Grasses and Forage Crops.** The different varieties of grasses and forage crops are studied with reference to their yield, composition, and feeding value. Special attention is paid to those grasses and forage crops that are adapted to southern conditions. As silage is undoubtedly the cheapest form in which forage crops can be preserved in this state, considerable attention will be given to the crops best adapted for silage, the best method of handling the crop, and harvesting it. Three hours. Third term. *Junior.*

5. **Soil Physics.** A study is made of the origin of soils, the different forms of disintegration, and the physical properties of different types, especially in their relation to crop production. Laboratory experiments are required with type soils. Each student must bring from his home not less than 150 pounds of his home soil. This should be an average sample, taken from several places of the most uniform type prevalent on his home farm and community. In addition to the text, parallel reading

will be assigned. Two lectures and two laboratory periods. First half year. *Junior*.

6. **Soil Fertility.** Factors in crop production, and methods of controlling these are studied with especial attention to the influence of culture and fertilization. Methods of handling the soil, so as to cause more permanent fertility, rather than a temporary crop production are emphasized. Special attention will be given to the uses of commercial fertilizers, and general soil management. Parallel reading, "How Crops Feed," by Johnson; "Chemistry of Plant and Animal Life," by Snyder. Two lectures and two laboratory periods. One half in the second and third terms. *Junior*.

7. **Advanced Work.** Students specializing in Agronomy will be allowed the privilege of either continuing soil work, or farm crops. This course will be made to suit the needs of the students as nearly as possible. Considerable time will be spent in studying the records that have accumulated from the work in the demonstration field, as well as first hand study of these crops under field conditions.

COTTON INDUSTRY.

R. J. H. DeLOACH, Professor.

1. **Laboratory Course in Combing and Mounting.** To meet successfully the demands of the cotton markets, growers must know the essentials of a good variety of cotton, and this course is offered to enable students to comb and mount samples of each variety for comparison. Offered to special students. One lecture and two laboratory periods of one hour each, per week. First term. Required of all men who elect cotton industry.

2. **Cotton Grading.** In this course will be given the essentials of cotton grading together with a study of the "standard grades" of American uplands, and Sea Island cottons. Score cards will be used in this course, and students marked largely by their work in actual grading. Offered to special students. Three hours per week. Second term. No text-book required. Note books required.

3. **Cotton Industries.** General course in cotton industries including the above courses, together with a course in the marketing and handling of cotton from the commercial standpoint. A study of varieties and variety tests, and selection for improving cotton. Offered to special students who wish to take a short course in the department of cotton industry. Three hours per week during entire year. Bulletins and other publications referred to during course.

4. **The Cotton Fiber.** A scientific course in the structure of

the cotton fiber, with a classification of fibers and their uses. Consideration will be given to the botanical relations of cotton fiber, the effect of ginning and baling, and final uses of the fiber for manufactured products. General reference will be made to the chemistry of the fiber, and the processes of dyeing. Text: F. H. Bowman's *Structure of the Cotton Fiber*. Three periods, first and second terms. Two lectures and one laboratory period. Juniors who elect cotton industry and general Senior course.

5. **Plant Breeding.** A general course in the principles of plant breeding, with special references to technique in cotton breeding. The course will consist partly of lectures and partly of field experiments. Text: Bailey's *Plant Breeding*, supplemented by DeVries' *Plant Breeding*, and numerous references. Three hours, third term. Juniors. Seniors general course.

6. **Experiment Station Work.** Designed to give a review of experiment stations, their history and influence, a study of the agricultural societies in the United States, and their relation to the history of experiment stations. Some consideration will be given to the land grant colleges. Students who take this course will be required to do a considerable amount of seminar work. Three hours, first term. Seniors.

7. **Research.** Advanced courses will be offered in the principles of plant breeding, in which opportunity will be given for the study of the cytology of cotton, and the cytological aspects of cotton breeding. Three periods per week. One lecture and two laboratory periods, during entire year. Senior students in cotton industry.

This course counts for graduate work when properly supplemented. See announcement of the Graduate School.

For One-Year Students.

A general course made up from courses 1 and 2, cotton industry.

ANIMAL HUSBANDRY.

ANDREW M. SOULE, Professor.

MILTON P. JARNAGIN, Professor.

HENRY W. MOORE, Tutor.

1. **Principles of Dairying.** This course includes the theoretical and applied side of dairy and creamery practice. A detailed study will be made of the theory of milk secretion, formation, and production; separation of cream by the shallow and deep setting systems, and by the use of the centrifugal machine. The natural fermentations occurring in milk, their benefit and control; the manufacturing of butter; the testing of milk and its products for butter fat will be considered in their proper order.

The use of the various acid tests, and of the lactometer for detecting adulterations in milk; the preparation of certified milk, and the marketing of milk and its by-products constitute a part of the work in this course. Two 1-hour recitations and two 2-hour laboratory periods each week. Second term. Freshman year.

2. **Horses, Mules and Beef Cattle.** In this course the origin, history and development of the various breeds of horses and beef cattle will be studied. The adaptation of the various breeds and types to different conditions of soil, climate and environment; a comparison of draft and light horses will be made, and especial emphasis laid on the adaptation of the different types of horses and mules to the various kinds of work. Two 1-hour recitations each week. First term. Sophomore year.

3. **Dairy Cattle.** In this course the origin and utility of the several breeds of dairy and dual-purpose cattle will be studied. Their adaptation for the production of milk, butter, cheese, or for both milk and beef making will be carefully considered. A comparison of the profits to be derived from the various breeds under different conditions of farming will form an important part of the instruction provided. Two 1-hour recitations each week. Second term. Sophomore year.

4. **Sheep and Swine.** This course embraces a study of the history and development of the various breeds of lard and bacon hogs, both of English and American origin. Especial attention will be given in this course to types of hogs suited to grazing. The history of the various breeds of sheep will be taken up, and comparison of the several classes made. Special emphasis will be laid on growing and marketing hothouse lambs and on classifying wool. Two 1-hour recitations. Third Term. Sophomore year.

5. **Stock Judging.** The students will receive training in the use of the score card for the various classes of live stock, and will study the standards of excellence as established by the several breeders' associations. In addition to this they will be given practical work in comparative judging and show ring placing of the various breeding and market classes of horses, dairy and beef cattle; bacon and lard hogs; fine wool, medium wool, and long wool sheep. Two 2-hour laboratory periods each week. First, second and third term. Sophomore year.

6. **Principles of Breeding.** The principles of breeding include a consideration of selection, heredity, atavism, normal variation and fecundity. The methods of breeding studied include in-breeding, line-breeding, cross-breeding, and a review of the methods by which the best types of animal have been developed. Two 1-hour recitations. Third term. Junior year.

7. **Practice in Breeding.** In this course the students will be

given instruction in the tabulation of pedigrees; filling out of applications for registry; the making of transfers of recorded animals as required by the different breeders' associations; also a study of the rules governing eligibility for registry. Students will be familiarized with the fashionable and popular blood lines in the various breeds. Two 2-hour laboratory periods. Third term. Junior year.

8. **Animal Nutrition.** In this course a study of the gross anatomy and physiology of the digestive system is included. The theoretical and practical side of compounding balanced rations for maintenance, milk and butter production, fattening and growth are fully explained. Two recitations per week. First and second terms, Senior year.

9. **Advanced Work in Animal Nutrition.** This course is provided for advanced students in Animal Husbandry. The results of feeding tests at the various Experiment Stations and Agricultural Colleges in this and other countries will be reviewed. Three 1-hour recitations per week. First term, Senior year.

10. **Feeding Problems.** Qualified students will be allowed to assist in conducting feeding tests, keeping records and summarizing results of experimental feeding conducted by the Department of Animal Husbandry. They will also be expected to make analyses of the various feeding stuffs used and to determine the fertilizing value of the excreta obtained from various classes of farm animals. Three 1-hour recitations per week. Second term.

11. **Economics of Animal Production.** In this course the various types of breeds of live stock will be considered in their relation to the utilization of various farm crops; relation to the productiveness of the soil; and the creation of wealth in general. Three 1-hour recitations per week. Third term.

12. **Research Work in Animal Husbandry.** Qualified students will be allowed to carry on investigations in Animal Husbandry under the approval and direction of the professor in charge of the department. Three hours. Senior.

HORTICULTURE.

T. H. McHATTON, Professor.

1. **Elements of Horticulture: Fruit Growing.** A general study of location, site, frost, planting, varieties, orchard tillage and management. Book: Principles of Fruit Growing, Bailey; to be supplemented by lectures. Three lectures per week. Required of Freshmen in Fall Term.

2. **Pruning and Propagation.** A course in grafting, budding and other methods of propagation; also a study of the principles

of pruning with its practice and effect. A few periods will be devoted to a study of varieties both for the orchard and truck garden. Book: *The Nursery Book*, Bailey, to be supplemented by lectures. Laboratory course of three periods per week. Required of Freshmen in Winter Term.

3. **Elements of Horticulture: Truck Gardening.** A general study of the main truck crops as to planting, tillage and handling, with the addition of a study of hot-beds and their management. Book: *The Principles of Truck Gardening*, Bailey; to be supplemented by lectures. Three lectures per week. Required of Freshmen in Spring term.

4. **Small Fruits.** A study of the various small fruits of interest to the horticulturist. Three lectures a week for six weeks. Book, *Bush-Fruits*, by Card. **Fruit Harvesting, Storing and Marketing.** Three lectures a week for six weeks. Book, *Fruit Harvesting, Storing, Marketing*, by Waugh. Required of Juniors electing Horticulture in the Fall term.

5. **Pomology and Garden Seeds.** A course in the testing of seeds and a study of the several varieties of fruit with their pomological classification. Book: *Systematic Pomology*, Waugh, to be supplemented by lectures. A laboratory course of three periods per week, to be carried with course 4. Required of Juniors electing Horticulture in the Fall term.

6. **Greenhouse Management and Floriculture.** A study of the various flower crops, forcing crops and management of a greenhouse. Reference books, *Greenhouse Management*, Taft; *The Forcing Book*, Bailey, and *Practical Floriculture*, Peter Henderson. Three lectures per week. Required of Juniors electing Horticulture in the Winter term.

7. **Greenhouse Construction.** A study of the different types of greenhouses and the heating, construction, etc., of the same. In connection with this course trips to florists and nurseries will be taken to study the plants and greenhouses. A ground plan, end elevation, bill of material and description of heating plant used in a greenhouse will be required of the student at the end of this course. Reference book, *Greenhouse Construction*, Taft. A laboratory course of three periods per week. Required of Juniors electing Horticulture in the Winter term.

8. **Orchard and Garden Diseases and Pests.** A study of the insects and diseases of economic importance, especial attention being given to their life histories and the injuries caused by them. Reference books: *Insects Injurious to Fruits*, Saunders; *Insects Injurious to Vegetables*, Chittenden; *Diseases of Plants*, Tubeuf & Smith; *Massee on Plant Diseases*. Three lectures per week. Required of Juniors electing Horticulture in Spring term.

9. **Spraying.** A laboratory course to be given with Horticulture 8. Practice given in the making and application of the different spray mixtures, with a study of their history and chemistry. Reference book, *The Spraying of Plants*, Lodeman. Three laboratory periods per week. Required of Juniors electing Horticulture in the Spring term.

10. **Landscape Gardening.** A study of the various schools of Landscape Architecture and also of the plants used in producing the various effects. A problem in Landscape Gardening will be given to each student, and a drawing showing his solution required. Book: *Landscape Gardening as Applied to Home Decoration*, Maynard. Three lectures and three laboratory periods per week. Required of Seniors electing Horticulture in the Fall term.

11. **Literature of Horticulture.** A course in the general history of Horticulture, with a study of the different reference books and papers. Three lectures per week. Required of Seniors electing Horticulture in the Winter term.

12. **Thesis.** The student is here asked to select some problem in one of the divisions of Horticulture, and will be allowed to find the solution in his own way. Time is given for consulting with the instructor so that his help may be obtained from time to time. At the end of the course a thesis stating the problem, the methods followed, and the results obtained will be required of the student. Three lecture hours and three laboratory periods per week. Required of Seniors electing Horticulture in the Spring term.

13. **Graduate Course.** See announcement of the Graduate School.

FARM MECHANICS.

LEROY C. HART, Adjunct Professor.

1. **Wood Work.** In this course will be considered the use and care of tools, planning work, making joints, and framing that will be helpful in construction work necessary under farm conditions. Required of Freshmen. First term. Two laboratory periods per week.

2. **Forge Work.** This work is designed to make a man competent to repair any ordinary breakage of farm machinery. Some practice work will be given in welding and shaping iron. Additional work in the handling of steel, especially in the making and tempering of hand tools will be given. Freshman year. First term. Two laboratory periods per week.

3. **Drawing.** Sufficient time will be devoted to free-hand drawing to enable the student to execute readily the necessary

drawings in the various laboratory courses. Mechanical drawing will then be taken up so that the student may become familiar with the use of the instruments, and be able to execute rapidly and neatly any drawing of this kind that will be required. Freshman year. First term. Two laboratory periods per week.

4. **Farm Machinery.** A study will be made of the construction and use of the various farm machines, such as planting, cultivating and harvesting machinery. Considerable time will be given to the practical handling of power machines, including electric motors, and gasoline and steam engines. Freshman year. Third term. Two laboratory periods each week.

5. **Surveying.** This work will consist of the study and the use of farm levels and compass in terracing, leveling and the survey of farm lands. It will enable the students to survey out their farms and to compute the area in each field under cultivation. The location of farm roads and the grades of same will be taken up and thoroughly studied. Each student will be required to make a thorough map of a plot of ground that will need tile drainage. All notes will be taken by the students.

6. **Farm Buildings and Fencing.** This will include a study of the strength and adaptability of various material for building and fence construction. The principles of construction will be emphasized particularly, as well as the planning of the various farm buildings. Special attention will be given to farm convenience and sanitation. Considerable time will be spent in studying problems of lighting, heating, water supply, and sewerage for the farm home. Junior year. Second term. Two lectures and one laboratory period.

7. **Concrete Construction.** A study will be made of the principles of concrete construction and their application to farm conditions. The various uses to which concrete has been put in late years will be pointed out. Special attention will be given to its use for residences and barns. The construction of fence posts from concrete will be taken up. Optional for Seniors. Two lectures and one laboratory period.

8. **Road Building.** A study will be made of the various types of machinery used in road construction. Practice work will be given in locating roads on the most desirable grades with special attention to drainage. Considerable time will be devoted to road material, and tests of the various kinds of rock for this purpose will be made. Optional for Seniors. Two lectures and one laboratory period each week.

Note.—6 and 7 will constitute half a year's work.

VETERINARY SCIENCE.

W. M. BURSON, Professor.

1. Consists of lectures and demonstrations covering the Anatomy and Physiology of the animals of the farm. Special attention is given to the anatomy of the horse and cow with variations occurring in other farm animals. Histology is taught by lectures and by examination of animal tissues under the microscope. Materia Medica is taught by lectures, examination of specimens of crude and prepared drugs and medicines. First, second and third terms. Two hours per week. Sophomore year.

2. Consists of laboratory work in the above subjects. First, second and third terms. One laboratory period per week. Sophomore year.

3. Consists of lectures on Pathology, Bacteriology, Parasitology, Theory and Practice, and Lameness. First, second and third terms. Two hours per week. Junior year.

4. Consists of laboratory courses in Pathology and Bacteriology. First and second terms. One laboratory period per week. Junior year.

5. Consists of lectures in Theory and Practice, Therapeutics, Surgery, Dentistry, Obstetrics and Contagious Diseases. First, second and third terms. Senior year. Two hours per week.

6. Consists of free clinics held during the school year at the Veterinary Hospital. Third term. Junior year. First, second and third terms. Senior year.

AGRICULTURAL CHEMISTRY.

W. A. WORSHAM, JR., Professor.

1. **Organic Chemistry.** This course consists of the study of the classification and relation of the carbon compounds, and the preparation of the simpler and more important ones.

Stress will be laid on those compounds relating most directly to agriculture, such as the organic compounds in the soil, feeds, foods, and organic food adulterants.

Students taking this course must have had elementary Chemistry 1, or Inorganic Chemistry 2, including work in laboratory. Haskins & Macleod Organic Chemistry will be used as a basis of this work. Three hours of lectures and recitations and one laboratory period during first and second terms of Sophomore year.

2. **Qualitative Analysis.** In this course a study will be made of the characteristic properties and the reactions of the common metals and the acid radicals, and the general principles underlying qualitative analysis. By systematic work with known substances and then "unknowns" the student will be able to familiarize him-

self with the processes employed in qualitative analysis. This course is designed to enable the student to know the composition of all ordinary substances, particularly those that are of most importance in agriculture. Text: Noyes' Qualitative Chemical Analysis; special problems outlined by the instructor.

Two hours of lectures and recitations, and two laboratory periods during third term of Sophomore year, and two hours of lectures and recitations and four laboratory periods during first term of Junior year.

3. Quantitative Analysis. The object of this course is to prepare the student for special work in agricultural chemistry as well as to teach the method of quantitative analysis.

The methods of both gravimetric and volumetric analysis will be treated in lectures and the practice carried out in the laboratory. Substances of known percentage composition will first be analyzed and then substances of unknown composition, including the simpler agricultural products. Texts: Morse's Quantitative Analysis; Sutton's Volumetric Analysis. Reference books: Quantitative Analysis, by Treadwell, Olsen, and Fresenius.

4. Advanced Quantitative Analysis. The basis of the work in this course will be the study of the methods employed in soil investigations, the analysis of soils, fertilizers, feeds, waters, etc. Some latitude will be allowed the student as to the substances to be analyzed. Students taking this course must have had Agricultural Chemistry 3. No text books required. Work for laboratory will be outlined and standard references given.

Two hours of lectures and recitations and four laboratory periods for three terms during Senior year.

Fees.—No laboratory fees are charged for any of the courses offered in this department.

A deposit of \$5.00 will be required for each laboratory course to cover breakage of apparatus. If any of this amount is left it will be returned to the student at the end of the year.

FORESTRY.

ALFRED AKERMAN, Professor.

Work of the School of Forestry.

The school was created in 1905; and work was begun with the academic year 1906-1907. Several lines of work have been undertaken: (1) Instruction in Forest Economics, to bring out the importance of our forests to the state and to the nation; (2) Elementary instruction in forestry, to familiarize the agricultural students with the management of farm woodlots and the execution of forest working plans; (3) Instruction in professional forestry, for those who intend to go into the lumber business, or to

follow forest engineering as a profession; (4) Popular education in forestry throughout the state; (5) Coöperation with the owners of woodlands.

The work along the first line is embodied in course 1; along the second line in courses 2 and 3; along the third line in courses 4, 5, 6, 7, 8, and 9; along the fourth line in publications and in lectures before schools, farmers' institutes, lumbermens' associations, and other interested organizations; along the fifth line in the coöperative agreement which the College of Agriculture makes with woodland owners.

Description of Courses.

1. **Economics of Forestry.** This course is designed to bring out the importance of the forest to the state and nation. It deals with the direct and indirect utilities of the forest, that is, the production of lumber, naval stores, tan-bark, and fuel; the regulation of stream-flow; and influence on climatic conditions. Six lectures, third term. *Required of Seniors in Economics.*

2. **Farm Forestry.** A study of forestry as applied to farm woodlands. The course is designed to give a working knowledge of how to secure a stand of timber, how to thin, protect, and harvest the forest crop. Text: Akerman's "Farm Forestry." Two 1-hour recitations and one 2-hour practice period, third term. *Required of those taking the one-year course in Agriculture.*

3. **Farm Forestry, Longer Course.** Similar to course 2, but adapted to more advanced students. Two 1-hour lectures and one 2-hour practice period, second half year. *Optional with Seniors in Agriculture.*

4. **Dendrology.** This course comprises a botanic and economic study of forest trees. Identification of species in the woods in summer and winter habit is given special attention. Instruction is given by lectures, laboratory work, and excursions. Reference work: Sargent's "Manual of the trees of North America." Three hours, Sophomore year. *Required of candidates for degree in Forestry.*

5. **Silviculture.** A study of forest stands from their founding to maturity, including artificial and natural reproduction, tending the stand, and silvical notes on the important species. Instruction by lecture, excursion, and practice. Three hours, Junior year; six hours first term of Senior year. *Required of candidates for degree in Forestry.*

6. **Forest Protection.** A study of the injury to the forest from trespass, fire, storms, insects, fungi, and grazing, and of protective measures. Instruction by lecture, excursion, and practice. Six hours, third term, Senior year; three hours first term. *Required of candidates for degree in Forestry.*

7. **Forest Mensuration.** Computation of contents of logs,

standing trees and forest stands; studies in diameter, height, and volume increment; the use of instruments of mensuration; occular estimation of timber; log scales and their use. Instruction by text, supplemented by lectures and practice in the woods. Text: Graves' "Forest Mensuration," and Cary's "Manual." Six hours first term Senior year. *Required of candidates for degree in Forestry.*

8. **Forest Management.** Forest valuation, financial returns from forest property; principles of forest working plans; construction of a forest working plan for a given tract. Instruction by lecture, with practice in the woods. Senior year, six hours second and third terms. *Required of candidates for degree in Forestry..*

9. **Lumbering and Utilization.** A study of the lumber industry, and the uses of wood (not included in Civil Engineering 3); the methods employed by lumbermen, and their improvement; felling, transportation, and manufacture. An essay on some branch of the lumber industry is required. Instruction by lectures, supplemented by reading and investigation. Six hours, second term, Senior year. *Required of candidates for degree in Forestry.*

10. **Wooden Building Materials.** A review of the principal timber trees; their distribution, properties, and uses. Methods and results of seasoning and injection with preservatives. Ten lectures, third term. *Required of Seniors in Civil Engineering.*

SUMMER TERMS.

Candidates for degree are required to live for two months each summer between the Sophomore and Junior, and Junior and Senior years at a lumber camp, sawmill, or turpentine distillery, to keep a diary of each day's work, to make a herbarium of the forest flora of the locality, and prepare a thesis on the operations being carried on. It is preferred that students secure some employment connected with the operations.

CO-OPERATION WITH LUMBERMEN.

The College furnishes an expert to examine woodlands and prepare suggestions as to their management. Those who desire advice in the management of woodlands or in planting waste lands should make application on blanks which are sent on request.

MATHEMATICS.

C. M. SNELLING, Professor.

R. P. STEPHENS, Adjunct Professor.

R. S. POND, Instructor.

1. **Algebra.** *Required of Freshmen.* The work of the Freshman Class will include Graphical Representation, Simultaneous Quadratics in two variables, Mathematical Induction, Binomial Thero-

rem, Arithmetical and Geometrical Progression, Permutations and Combinations, Complex Numbers, The Theory of Equations and Determinants, as presented in Hawkes' Advanced Algebra. Three hours a week. Text-book: Hawkes' Advanced Algebra.

2. Solid Geometry. Three hours per week until Feb. 1st. Books V to IX inclusive. *Required of Sophomores.* Text-book: Wentworth's Solid Geometry (Revised Edition).

3. Plane Trigonometry. Three hours per week after Feb. 1st. Definition of Trigonometric Functions, The Right Triangle, Goniometry, the Oblique Triangle and Applications. *Required of Sophomores.*

4. Algebra and Spherical Trigonometry. The first part of this course will be from mimeographed notes on Convergency and Summation of Series, Binomial Theorem for all exponents, Undetermined Coefficients, Logarithms. The second part will include the usual subjects in Spherical Trigonometry. (Sophomore class). Three hours per week the first term. Texts: Murray's Spherical Trigonometry, Murray's Tables.

5. Analytic Geometry (Shorter Course). Coördinates, Straight Line, Circle, Parabola, Ellipse, Hyperbola and General Equation of the Second Degree. (Sophomore class). Three hours per week for the first half year. Text: Nichols's Analytic Geometry.

7. Calculus (Introductory). Elementary principles of Differentiation and Integration with applications. (Sophomore class). Three hours per week for the second half year. Text: Nichols's Differential and Integral Calculus.

CIVIL ENGINEERING.

C. M. STRAHAN, Professor.

E. L. GRIGGS, Associate Professor.

1. Elementary Surveying. An introductory course including the use, care and adjustment of instruments, and the methods of land surveying by chain alone, by compass, and by transit; the methods of platting and computing areas; the variation of the magnetic needle; problems in parting off and dividing up land, and leveling; plane table and stadia surveying, and the use of the solar transit. Three hours per week. Junior. General elective. Text: Barton's Surveying.

2. Railroad Engineering. Methods of reconnoissance, preliminary and location surveys; cross-sectioning, computations and estimates, and the various other problems involved in the complete Engineering of Railways. Five hours per week, first half year. *Required of Juniors in Civil and Electrical Engineering courses.*

3. Materials and Construction. A course of lectures upon the various materials of engineering, their occurrence, preparation,

properties, use and testing; building construction, and the superintendence of building operations; and highway construction. Five hours per week, second half year. *Required of Juniors in Civil and Electrical Engineering courses.* Lectures.

6. **Linear Drawing and Projections.** The first part of this course includes the construction of simple geometrical figures, designed to teach the use of instruments and habits of neatness and precision. The work in projection follows. The course is illustrated by models and written examinations are held at intervals. Practice in lettering is given throughout the course. With this course is given also two hours per week of free-hand drawing. Six hours per week, first term. Freshmen. Text: "Elements of Drawing," Strahan and Griggs.

9. **Topographical Drawing.** Topographical map of a practice survey on an elaborate scale. Four hours per week, first half year. *Required of Juniors in Civil Engineering course.*

PHYSICS.

L. L. HENDREN, Professor.

E. T. MILLER, Instructor.

1. **Elementary Physics.** A first year course designed for candidates for the A.B. degree. Text-book: Millikan and Gale's *First Principles of Physics*. Three hours per week recitation, and two hours per week laboratory work.

2. **Advanced Physics.** A second year course designed for candidates for the A.B. degree, covering the subjects of Mechanics, Heat, Electricity and Magnetism. Three hours per week recitation and two hours per week laboratory work.

3. **Theoretical Physics.** Lectures, demonstrations, and recitation work on the Wave Theory of Light, the Propagation of Electromagnetic Waves, the Discharge of Electricity through Gases, and the Electron Theory of Electricity and Matter. Three hours per week.

4. **Descriptive Astronomy.** Text-book: Moulton's *Introduction to Astronomy*. Three hours per week, first half year.

5. **Elementary Physics.** A first year course designed for candidates for the B.S. degree. Text-book: Millikan and Gale's *First Principles of Physics*. Three hours per week recitation, and two hours per week laboratory work.

6. **Advanced Physics.** A second year course designed for candidates for the B.S. degree, covering the subjects of Mechanics, Heat, Electricity and Magnetism. Three hours per week recitation and two hours per week laboratory work.

Note.—A laboratory fee of \$5.00 will be required of those taking courses 1, 2, 5 or 6.

CHEMISTRY.

H. C. WHITE, Professor.

H. V. BLACK, Associate Professor.

C. A. WELLS, Instructor.

The following courses are offered for agricultural students:

1. **Elementary Chemistry.** Three hours per week of lectures and recitations and two laboratory periods, for three terms. Text: Remsen; Kahlenberg; Outlines of Chemistry.

2. **Inorganic Chemistry; College Course.** Three hours per week of lectures and recitations and two laboratory periods, for three terms. Text: Kahlenberg; Outlines of Chemistry.

BIOLOGY.

J. P. CAMPBELL, Professor.

The following courses are offered for the ensuing year:

2. **General Invertebrate Zoölogy.** This course is based upon the laboratory study of a selected series of types representing most of the main divisions of the animal kingdom. Arthropods are studied in the first term, Mollusca, Annulata, and the smaller phyla in the second, and Echinoderms, Coelentera and Protozoa in the third. The morphological point of view predominates, but attention is also given to physiology, ecology, embryology, and classification, and in addition, each group is made to illustrate some important theoretical question to which it is especially adapted. Three hours weekly with laboratory work additional. *Required of Juniors taking Animal Husbandry elective.*

3. **General Vertebrate Zoölogy.** This is a continuation of course 2, and the same general methods prevail. The Protochordata are first taken up with a discussion of the theoretical questions that they involve, after which the various vertebrate classes are considered, attention being given to structure, ecology, classification, economic problems, etc. Three hours weekly during the first term with laboratory work additional. *Optional to Seniors taking Animal Husbandry elective.*

5. **Animal Physiology.** This course is planned for students who have a good knowledge of elementary Physiology equal in scope to that given by course 1, and who have in addition a good working knowledge of Physics and Organic Chemistry. Special topics are taken up for fairly exhaustive treatment, and the effort is made to bring the student into touch with the latest developments of the subject. The laboratory work consists in part of Physiological Chemistry, and in part of experimental

Physiology. Three hours weekly with laboratory work additional during second and third terms. *Optional to Seniors taking Animal Husbandry elective.*

BOTANY.

J. M. READE, Professor.

The following courses have been arranged to meet the needs of students in agriculture. Course 1 is for beginners, and presupposes no knowledge of the subject. Courses 1 and 2 are foundational and preparatory to further work in botany or the applications in horticulture and agronomy. Course 1 is required of Sophomores. Course 2 is required of Juniors in groups 1, 2, and 4 and optional in 5. Courses 3 and 4 or 5 are required of Seniors in groups 2 and 4 and optional for Seniors in group 5.

1. **Introduction to Botany.** An elementary course dealing with the main facts concerning the structure and biology of common plants. The work is arranged to give the student at once a synopsis of the whole field and to initiate him to scientific work. Two hours and two laboratory periods weekly throughout the year.

2. **General Morphology of Plants.** A survey of the great natural groups together with discussions of the particular problems in each in development and evolution. The laboratory work is based on a careful study of a series of selected types, materials of which are provided, but is supplemented with field work in the local flora, and in cultivating sorts and in collecting and preparing for study materials in various stages of development. Two hours and two laboratory periods weekly throughout the year.

3. **Mycology.** A general account of the morphology and biology of the Fungi. Special attention is given to kinds which are of importance to agriculture and manufactures as associated with plant diseases, organic decay, soil fertility, lumbering, and to kinds edible and poisonous. Two hours and two laboratory periods weekly throughout the year.

4. **Plant Diseases.** An information course planned to meet the needs of those who require a practical knowledge of the subject. The common diseases of the more important field and garden crops are discussed as to their cause, methods of control, and literature. Two hours and two laboratory periods weekly during the second half-year.

5. **Plant Physiology.** A series of laboratory experiments based on Ganong's Plant Physiology as text, together with other assigned reading and conferences. One hour and three laboratory periods weekly during the second half-year.

6. **Plant Histology.** A course in this subject is offered as a Senior option and will be given provided it is applied for before

the opening of the year. One hour and three laboratory periods weekly throughout the year.

7. **Bacteriology.** Opportunity is offered to properly qualified students to pursue work in this field. The equipment of the bacteriological laboratory is exceptionally good.

8. **Experimental Evolution.** Opportunity is offered to properly qualified students in the statistical and experimental study of variation and the origin of new species and varieties of plants.

The following special courses given during 1909-1910 may, if conditions warrant it, be repeated:

(a). **Plant Study.** Experiments and discussions dealing with a selected series of topics in plant life and behavior. Three hours weekly during the fall term.

(b). **Cotton Diseases.** Brief descriptions and discussions of the principal diseases of the cotton plant and the means of their control. Five hours during the session of the Cotton School.

Note.—By special action of the Faculty a professor may at his option substitute laboratory time for class work at the rate of two hours of the former for one of the latter.

RHETORIC AND ENGLISH LITERATURE.

R. E. PARK, JR., Professor.

S. V. SANFORD, Junior Professor.

S. M. SALYER, Instructor.

2. **Composition and Rhetoric.** Detailed study and practice in construction and kinds of composition. This course will involve continual practice in writing and some work in rhetorical analysis. Lectures, themes, daily exercises. The course is based on Scott and Denny's "Paragraph Writing," and Genung's "Practical Rhetoric." *Required of Freshmen.* Full course, three hours.

3. **Outline of English Literature,** and masterpieces of selected authors studied with reference to (1) elements of literature, (2) species of literature, (3) historical development. The object of this course will be to give the student a general view of the history and development of English Literature, with more detailed knowledge of certain periods. Throughout the course much attention will be devoted to the writing of essays as a means of training the student to appreciate and express his appreciation of the literature studied. *Required of Sophomores.* Full course, three hours.

4. **Criticism.** The principles of literary criticism and the practical application of these principles to the various forms of literature. *Required of Juniors.* Three hours a week, first term.

HISTORY AND POLITICAL SCIENCE.

J. H. T. McPHERSON, Professor.

W. O. PAYNE, Associate Professor.

R. P. BROOKS, Adjunct Professor.

2. **European History.** In this course one or more characteristic periods of European History are studied intensively. The period considered and texts used are changed from year to year. During the present session the Sixteenth and Seventeenth Centuries were studied, with Johnson's "Europe in the Sixteenth Century," and Wakeman's "The Ascendency of France," as texts. *Required of Sophomores.*

4. **Political and Constitutional History of England.** Especial attention is paid to the development of Parliament, the Cabinet, and the phases of local government—township, parish, manor, hundred, and country—with the object of laying a thorough foundation for the subsequent study of American institutions. The progress of contemporary European events is kept constantly in view. Three hours per week throughout the year. Text: Gardiner's "History of England." *Sophomores.*

14. **Economics.** A course at once introductory and advanced, designed to give mature students a grasp of the principles and a survey of the field of Economics. Text: Seligman's "Principles of Economics." Three hours per week first and second terms. *Seniors.*

15. **Economic History of the United States.** The principles acquired in History 14 are here applied in a systematic review of the economic and financial experience of the country, and in a careful study of the leading problems of the day. Taxation, Banking, Tariff, Railway, Municipal, Trust, and Labor problems are given detailed consideration. Three hours per week third term. *Seniors.*

GERMAN.

JOHN MORRIS, Professor.

M. D. DuBOSE, Adjunct Professor.

1. A course for beginners who are conditioned in German and wish to substitute both German and French for Greek in the A.B. degree. For 1910-11 this course comprised an elementary grammar and reader, with daily written and oral exercises in parsing and in translation from English into German. Three hours per week. *Profs. Morris and DuBose.*

2. Continues the work of German 1, and completes the requirement for entrance given on page 27, General Catalogue. The course consists of translation of simple texts, with completion of grammar, accompanied by constant parsing, and exercises in

both speaking and writing German. Three hours per week. *Profs. Morris and DuBose.*

5. An elementary course offered as one of the Junior language options. After an oral introduction of several weeks, given exclusively in German, the class takes up a grammar or method book and works carefully through all the exercises, both oral and written. Conversation is also continued with the aid of such text books as Guerber's *Märchen und Erzählungen*, Wesselhoeft's *German Exercises*, Carruth's *Reader*, Stern's *Studien und Plaudereien* or Newsom's *First German Book*. Three hours per week. *Optional for Juniors. Prof. Morris.*

6. A continuation of the preceding course. The class translates from 600 to 1,000 pages of prose texts. Most of this work is done outside of the class room, but a careful examination is held on each book when completed. Practice in speaking and writing German continues throughout the year. Three hours per week. *Optional for Seniors. Prof. Morris.*

ROMANCE LANGUAGES.

J. LUSTRAT, Professor.

W. T. TURK, Tutor.

French.

1. A course for beginners who are conditioned in French and wish to substitute both French and German for Greek. The course consists of careful drill in pronunciation, the rudiments of grammar, the study of regular and irregular verbs, the inflection and use of personal pronouns, the rudiments of syntax, dictation, easy exercises of translation from English into French, conversation, and the reading of about 275 duodecimo pages of easy prose. Three hours per week.

2. The continuation of course 1, for students who are conditioned in French and wish to substitute both French and German for Greek. It will comprise the reading of about 400 pages of easy modern prose, constant practice in translating into French easy English prose, dictation, short drill in grammar and syntax, full study of all irregular verbs, and conversation. Three hours per week.

3. An elementary course offered as one of the Junior language options. In this course the various inflections, forms of words, verbs, regular and irregular, and constructions of sentences are taught from the beginning, but systematic study of the grammar is not begun until the second half-year, at which time reading, translation, and writing of letters in French are also begun. About 200 pages of easy French prose are read, and there is practice in conversational French. Three hours per week. *Optional for Juniors.*

6. A continuation of French 5. It consists of a thorough study of grammar and syntax; translation from English into French; dictation; French composition; the reading of about 1,000 pages of standard authors, classical and modern; parallel reading; and conversational French. Three hours per week. *Optional for Seniors.*

PHILOSOPHY AND EDUCATION.

T. J. WOOFER, Professor.

Education.

1. History and Principles of Education.
2. Educational Sociology.
3. The Educational Process.
4. School Administration and Supervision.

Philosophy.

1. General Psychology. First half year.
2. Logic, Deductive and Inductive. Second half year.
3. Social Philosophy. First half year.
4. Ethics. Second half year.

For fuller statements, see School of Education, general catalog.

GEOLOGY.

Vacant.*

1. **General Geology.** Three hours per week, second half-year. The course of instruction is at first a general one, embracing the study of the distinguishing properties of minerals and common rocks, the decay of rocks and the formation of soils. Following this is a more extended course of Structural, Dynamical and Historical Geography.

MILITARY SCIENCE AND TACTICS.

J. A. ATKINS,

2nd Lieut., 16th U. S. Infantry, Commandant.

In accordance with the provisions of the Land Grant Act, military exercises are regularly held in this College, upon which the attendance is compulsory by members of the Freshman, Sophomore and Junior classes, and the students in the One-Year Course in Agriculture, except when excused by the surgeon of the Corps of Cadets.

The uniform consists of a coat of standard Charlottesville gray cloth; winter trousers of same material, with stripe one inch wide;

*Temporarily in charge of the professor of Chemistry.

and blue cloth cap. The uniform costs about \$15.55. For spring use white duck trousers, jeans trousers and blue shirt, leggins and hat are required, costing about \$4.50.

Practical instruction is given three hours each week, covering the following subjects: Infantry Drill Regulations; Field Service Regulations; Manual of Guard Duty; Firing Regulations for Small Arms; Artillery Drill Regulations, partial.

Theoretical instruction, two hours each week, for commissioned and non-commissioned officers, is given in the portions of the above subjects covered by the practical instruction, and is supplemented by lectures. *One hour each week of theoretical instruction is required of Freshmen.*

ONE-YEAR COURSE IN AGRICULTURE.

This course commences at the opening of the fall session and continues throughout the collegiate year. The purpose of this course is to provide suitable instruction for those who can only remain in college for one year. An effort has been made therefore to condense the work as much as possible, provide a correct scientific foundation, and yet make the instruction of a very practical nature. An outline of the one-year course follows. The schedule indicates the number of hours required in each subject and the amount of time devoted to class room and laboratory work. Notice that the laboratory instruction has been emphasized as this is considered the best way of demonstrating the value of applied science to the solution of the problems of the farmer. Students entering this course who are capable of carrying the Freshman Mathematics or English may be permitted to do so upon the approval of the President of the College.

ONE-YEAR COURSE.

First Term.

| | Hours. | Lab. Periods. |
|---------------------------|----------|------------------|
| English | 3 | .. |
| Arithmetic | 3 | .. |
| Cereals | 2 | .. |
| Cereal Judging | .. | 1 |
| Soils | 3 | .. |
| Iron and Wood Work..... | .. | 3 |
| Horticulture | 3 | 1 |
| Breeds and Breeding | 3 | 2 |
| Botany | 3 | .. |
| Veterinary Medicine | 3 | .. |
| | <hr/> 23 | <hr/> 7 |

Second Term.

| | | |
|-------------------------------------|-------|-------|
| English | 3 | .. |
| Arithmetic | 3 | .. |
| Cotton and Cotton By-Products..... | 3 | 1 |
| Cotton Grading (Cotton School)..... | .. | .. |
| Soil Fertility | 3 | .. |
| Farm Machinery | .. | 1 |
| Horticulture | 2 | 1 |
| Dairying | 1 | 2 |
| Feeds and Feeding | 3 | 1 |
| Farm Management | 2 | .. |
| Veterinary Medicine | 2 | 1 |
| | <hr/> | <hr/> |
| | 22 | 7 |

Third Term.

| | | |
|--------------------------------------|-------|-------|
| English | 3 | .. |
| Farm Accounts | 3 | .. |
| Grass and Forage crops..... | 3 | 1 |
| Chemistry | 3 | .. |
| Plumbing and Pipe Fitting | .. | 1 |
| Horticulture | 3 | 1 |
| Farm Buildings | .. | 1 |
| Practice Work Animal Husbandry | .. | 1 |
| Surveying | 3 | 1 |
| Forestry | 2 | 1 |
| Veterinary Medicine | 2 | .. |
| | <hr/> | <hr/> |
| | 22 | 7 |

AGRONOMY.

Cereals and Cereal Judging. The history, use, and cultivation of the different cereals will be studied. Especial attention will be given to seed selection as influencing the yield of farm crops. A study of the various cereals, especially corn, will be made by use of the score card. First term. Three 1-hour recitations and one laboratory period.

Farm Management. An examination of the various business methods employed on different classes of farms is first undertaken. Special attention is given to systematizing the work and determining the effect of various rotations on the maintenance of fertility. A stereopticon is used to show how various kinds of farms should be arranged so as to conduct the business with the greatest economy.

Grass and Forage Crops. A study is made of the various grasses adapted to this state that can be utilized to the best

advantage for pasturage and hay. The uses of the forage crops, especially the legumes, are given considerable attention. Methods of growing and preserving silage are considered at length, as this is undoubtedly the best form for preserving forage crops in the South.

Soils. A study of the physical properties of soil is made, and the effect of good and poor mechanical conditions on crop production is demonstrated. Methods of improving the physical conditions are studied. Special attention is given to the water-holding capacity of the soil, and the best methods of conserving soil moisture. First half-year. Three 1-hour recitations.

Soil Fertility. The different fertilizing ingredients and their function in plant growth will be discussed. Methods of mixing fertilizers and determining the formulas best adapted to different soils will be studied. The effect of rotation of crops on soil fertility and the draft of the different crops on the soil will also receive attention. Second half-year. Three 1-hour recitations.

COTTON INDUSTRY.

Emphasis is laid on the importance of seed selection. A study of types of plants with special reference to their yielding capacity will be made, and the conditions affecting length, strength, uniformity, quality and quantity of fiber. Some attention will be given to combing and grading cotton, and all varieties will be studied in the seed in the laboratory. There will also be a complete set of grades of long staple and upland lint cotton in the laboratory for inspection and comparison, and students will be required to grade some cotton by the samples, after the basis of grading has been pointed out to them. Second term. Three 1-hour recitations.

ANIMAL HUSBANDRY.

Breeds and Breeding. A practical course will be given in the study of domesticated animals, and a consideration of the fundamental laws underlying their production. Three 1-hour recitations.

Dairying. In this course lectures will be given on the principles of modern dairying and on the manufacture of butter, cheese and other products. Practice work in the operation and repair of dairy machines will be required of all students. The use of the Babcock test, and other apparatus for the detection of adulteration of milk will be fully explained. One lecture and two laboratory periods. Second term.

Feeds and Feeding. In this course a study of the various feeding stuffs will be taken up. The balancing of rations and their adaptation for maintenance, development of bone and muscle,

production of milk and butter, and for maintaining and fattening farm animals will be discussed and explained. Three 1-hour recitations and one laboratory period. Third term.

Stock Judging. Scoring, judging and classifying the various classes of farm live stock will form an important part of this course. After the student has become proficient in the use of the score card, work will be given in comparative judging and show-ring placing. The standard of excellence as established by the several breeders' associations will also be given some attention. First term. Two laboratory periods.

HORTICULTURE.

Orchards. A study of orchards as to location, site, exposure, cultivation, fertilization, planting, pruning, spraying, thinning, harvesting, and marketing. Book to be used, Principles of Fruit Growing, by L. H. Bailey. Three 1-hour lectures and one laboratory period per week. First term.

Propagation and Pruning. A study of budding, grafting, and other methods of plant manipulation and propagation, with a course in the principles and practice of pruning. Three lectures and one laboratory period per week. Second term.

Small Fruit and Trucking. A course in the management of small fruit plantations and truck gardens, following much the same order as the orchard course. Particular attention will be given to the construction and management of hot beds as well as to the principal small fruit and vegetable crops of the section. Book: The Principles of Vegetable Gardening, Bailey. Three lectures and one laboratory period per week. Third term.

FARM MECHANICS.

Wood Work. This will include the care and use of wood working tools. It will be made as practical as possible. The majority of the exercises will consist of the construction of articles that will be needed on the farm, such as gates, fences, wagon beds, and other farm conveniences. First term. Two laboratory periods. Alternates with forge work.

Forge Work. This course will include welding and shaping of iron and handling of steel. Considerable attention will be paid to the making and tempering of small hand tools. A student after taking this course will be able to do all of the ordinary repairs of farm machines and other blacksmithing that will be necessary in farm work. First term. Two laboratory periods per week. Alternates with woodwork.

Farm Machinery. A study of the principles of construction and operation will be made. Considerable time will be given to studying the individual parts of the different farm machines, by

taking them apart and assembling them. Considerable time will be devoted to motors, especially gasoline and steam engines. Third term. Two laboratory periods.

Farm Buildings and Fences. The strength and adaptability of the materials available for construction will first be determined. Principles of construction will be studied, and considerable time given to planning the different farm buildings with especial regard to convenience and sanitation. The use of concrete on the farm will be pointed out and principles of concrete construction illustrated. Laboratory practice will constitute an important part of the work. One lecture and two laboratory periods per week.

Farm Engineering. Instruction will be given in the use of the instruments necessary in surveying farm lands, terracing, and locating of roads. Considerable time will be given to the location of farm buildings, roads, terracing, leveling, and tile drainage. One lecture and one laboratory period per week.

Plumbing and Pipe Fitting. A short course in plumbing and pipe fitting will be given in connection with Farm Buildings. It will consist of the location and planning of the water supply and drainage away from the home, and the proper laying out of a perfectly sanitary system of plumbing for all buildings. The proper assembling and selection of the material needed for a complete job, and the calking of all joints, etc., will be fully studied.

VETERINARY SCIENCE.

1. Consists of lectures in the anatomy and physiology of the horse, with brief notice of the variation occurring in the other farm animals. Lectures on *Materia Medica* cover the more commonly used drugs and medicines, paying particular attention to the action and dosage of the drugs. First term; three hours per week.

2. Consists of lectures on Theory and Practice, and Surgery; deals with the most common diseases of the horse and cow and the minor operations that are performed on these animals and the care of surgical and accidental wounds. Second term; two hours per week.

3. Consists of free clinics held at the Veterinary Hospital. One hour per week; second and third terms.

4. Consists of lectures on Obstetrics and Dentistry. Two hours per week; third term.

AGRICULTURAL CHEMISTRY.

This course is planned to prepare the student for intelligent study of the chemistry of soils, fertilizer and foods. At first the elements and compounds most important to agriculture will be

taken up. The composition of farm crops, and the application of chemistry to plant and animal life will be studied. Text: Chemistry of the Farm, by Warrington. This course consists of three lectures during last half of the year.

FORESTRY.

A study of forestry as applied to farm woodlands. How to secure a stand of timber, how to thin, to protect, and harvest the forest crop. Second half-year. Two 1-hour lectures and one 2-hour practice period.

THREE-MONTHS OR WINTER COURSE IN AGRICULTURE.

Short courses of instruction in agriculture and related subjects are offered for the benefit of those who are engaged or expect to engage in farming, and yet who are so situated that they cannot undertake a full college course of study. This course is given during the winter when work is least pressing and the time can best be spared. The course consists principally of the regular work provided during the winter term of the one-year course, with such additional elective subjects as the student finds he can conveniently carry upon consultation with the President of the College.

Those desiring to take this course can familiarize themselves with the nature and character of the work by referring to the schedule of the one-year course for the second term. Considerable extra work may be taken if desired. Certain subjects may also be dropped and others elected to meet the wishes of the student. Requirements for admission to this course and the cost have already been mentioned and need not be again detailed here. Those intending to take this course of instruction are urged to write to the College authorities some time in advance so that suitable arrangements can be made for them.

THE COTTON SCHOOL AND OTHER TEN-DAY COURSES.

The first Cotton School ever held was organized by the Georgia State College of Agriculture, January 6 to 17, 1908. Since cotton is the main crop of the State as well as of the South, it is fitting that an attempt should be made to put in pedagogic form the large amount of scientific information which has accumulated during recent years, and which will aid materially in solving many of the farmers' most perplexing problems. The object of the school is to present this information at a minimum of cost and in a concrete form, so that the facts may be applied successfully in every-day work on the farm. Admission to this course is free, a registration fee of \$1.00 being charged to cover incidental

expenses. The cost to the student therefore, consists of board while in Athens and railroad fare, or from \$15.00 to \$25.00. This means that practically a free course of instruction in the technique of cotton production is provided for the farmers of Georgia.

The ages of those attending this course range from 18 to 60 years, so that the students entering are a representative body of men. This course is not intended for irresponsible boys, but for those who are actually engaged in farming, and the instruction has been so arranged as to provide the largest amount of useful information in the shortest possible time. The success of the course means that it will be continued as a permanent feature of the work of the State College of Agriculture. The session for 1912 will open on January 2nd, and continue for ten days. The work will be so arranged that those desiring to remain twenty days may do so. The course of instruction will be essentially as follows:

Ten lectures on the soil, including a discussion of its origin, character, composition and utility for crop production.

Ten lectures on fertilizers, including a discussion of the essential elements of plant food and methods of purchasing, mixing and applying these various constituents to the soil for the purpose of producing maximum crops at a minimum of cost.

Five lectures on the cotton plant. These will include a consideration of the origin and composition of the plant, and conditions most favorable for its growth and development, and will include a discussion of varieties.

Five lectures on cotton cultivation. These include methods of seed selection which may be adopted and successfully practiced by farmers for the improvement of the quality of the staple.

Five lectures on cotton diseases. The principal diseases affecting cotton, the causes so far as known, and the best methods of combating and eradicating them will be discussed.

Five lectures on cotton insects. In these lectures the history, characteristics, and the best methods of controlling the depredations of the various insects attacking the cotton plant will be discussed.

Five lectures on feeding cotton by-products. The best methods of utilizing cotton by-products in the feeding of all classes of farm live stock will be considered in detail.

Five lectures on cotton machinery. The different forms of plows, cultivators and seeders which may be utilized so as to economize labor and increase the efficiency of soil cultivation will be considered.

Instruction in cotton grading. In this course the student will

have an opportunity to handle and grade ten or more samples of cotton each day just as the operation is performed on the warehouse floor. The score card will be used for recording his results and the instructor will then compare the various samples with standards and explain to the student wherein he has made a mistake. Cotton grading can be successfully taught and made the means of saving several millions of dollars annually to the farmers of Georgia. This feature of the work will be emphasized more strongly than ever in 1912.

Three lectures on cotton marketing. These lectures will include a discussion of the business of receiving, handling and shipping cotton.

Cotton seed. The character and quality of the various grades of seeds will be discussed, and the conditions which influence their value to the farmer and the manufacturer fully explained.

A series of special lectures at night for the students in the Agricultural College proper and the Cotton School will be arranged.

The schedule of recitations for the cotton school is given on the opposite page and is self-explanatory.

The necessity for instruction in cotton industries will be made apparent by the fact that there is a loss in the value of the staple as nature produces it and as placed upon the market of between ten and twenty millions of dollars every year in Georgia. This loss is largely avoidable and will be reduced materially when the handling and grading of cotton is made a part of the knowledge of the farmers in all parts of the State.

SCHEDULE OF RECITATIONS FOR COTTON SCHOOL

JANUARY 2nd TO 13th, INCLUSIVE, 1912

| Period | Tue. Jan. 2. | Wednesday Jan. 3. | Thursday Jan. 4. | Friday Jan. 5. | Saturday Jan. 6. | Monday Jan. 8. | Tuesday Jan. 9. | Wednesday Jan. 10. | Thursday Jan. 11. | Friday Jan. 12. | Saturday Jan. 13. |
|----------------------|-----------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 8:55 to 9:50 | | Fertilizers for Cotton | Fertilizers for Cotton | Fertilizers for Cotton | Fertilizers for Cotton | Fertilizers for Cotton | Fertilizers for Cotton | Fertilizers for Cotton | Fertilizers for Cotton | Fertilizers for Cotton | Fertilizers for Cotton |
| 9:55 to 10:10 | | | | | | | | | | | |
| 10:10 to 11:05 | | The Cotton Plant | The Cotton Plant | The Cotton Plant | The Cotton Plant | The Plant Cultivation of Cotton | Feeding Cotton By- products | Feeding Cotton By- products | Feeding Cotton By- products | Feeding Cotton By- products | Feeding Cotton By- products |
| 11:10 to 12:00 | | Cultivation of Cotton | Cultivation of Cotton | Cultivation of Cotton | Cultivation of Cotton | Cultivation of Cotton | Insect Enemies of Cotton | Insect Enemies of Cotton | Insect Enemies of Cotton | Insect Enemies of Cotton | Insect Enemies of Cotton |
| 12:05 to 12:55 | | The Soils of Georgia | The Soils of Georgia | The Soils of Georgia | The Soils of Georgia | The Soils of Georgia | The Soils of Georgia | The Soils of Georgia | The Soils of Georgia | The Soils of Georgia | The Soils of Georgia |
| 1:00 to 1:50 | | Diseases of Cotton | Diseases of Cotton | Diseases of Cotton | Diseases of Cotton | Diseases of Cotton | Farm Machinery | Farm Machinery | Farm Machinery | Farm Machinery | Farm Machinery |
| 1:50 to 3:10 | | | | | | | | | | | |
| 3:10 to 5:00 | | Grading and Scoring Cotton | Grading and Scoring Cotton | Grading and Scoring Cotton | Grading and Scoring Cotton | Grading and Scoring Cotton | Grading and Scoring Cotton | Grading and Scoring Cotton | Grading and Scoring Cotton | Grading and Scoring Cotton | Grading and Scoring Cotton |

REGISTRATION DAY

DINNER HOUR

CHAPEL EXERCISES

It is contemplated that in 1912 a ten-days course of instruction of the same practical character as that provided for in the Cotton School will be offered in animal husbandry, dairying, and horticulture. This will enable farmers who desire to obtain special training in any of the principal lines of agricultural industry to do so at a minimum of cost and during the greatest leisure period of the year.

THE FARMERS' CONFERENCE.

The need of vocational training for farmers constitutes the principal reason why the State College of Agriculture organized a Farmers' Conference in 1909. The third session was held January 17 to 19, 1911. The program was materially varied by the fact that the Georgia Dairy and Live Stock Association held its annual meeting on the dates indicated above. This was a decidedly pleasing innovation. This association has been in existence for a number of years and has done splendid work for the cause which it represents and is assisting materially in the commendable movement to have all the agricultural organizations of the State brought together into a federal association for the purpose of having its annual meeting held at the College of Agriculture. It is a pleasure to record that the State Horticultural Society has taken similar action, and it is believed that other associations will join the movement as rapidly as possible. This will enable the organization of a truly representative conference of all the agricultural interests of the State, and is bound to exert a material influence on its agricultural development.

The advisability of holding such a conference is shown by the fact that the fertility of our lands is decreasing, the depredation of insect pests and plant diseases becoming greater each year, and the purchase and use of fertilizers more necessary. How shall the farmer obtain the needed information with reference to these matters save through some such clearing house for agricultural information as the State College of Agriculture affords? Education measures the success and progress of a nation. We have neglected agricultural education in America because of our marvelous natural resources. But nature has rebelled, and now we must inaugurate crop rotations and give greater attention to the development of our live stock industries. There is need, therefore, for the dissemination of definite information relating to farm life and work in order that our present agricultural supremacy as well as the prosperity of the farmer may be assured not only for the present but for the future.

The meeting for 1912 will be held from January 17 to 19 as there is more leisure on the farm at this time than at any other

season. Every farmer should take a holiday and accord the same privilege to his wife. That such gatherings are beneficial is shown by the fact that 1,000 farmers attend meetings of this kind in some of the states where the agricultural college has been established on a substantial basis. Our farmers will find it quite as beneficial to them to attend these gatherings as those living in other states. Since the cost will only include railroad fare and one dollar a day for board while in Athens, there can be no question as to the advantages which will accrue to the individual who attends these gatherings and learns about the new facts of agriculture which it is necessary for him to know in order to conduct his business along the most profitable lines.

EXTENSION TEACHING.

It is the purpose of the College of Agriculture to aid all educational activities which are being carried forward in the State. The fulfillment of this purpose is one of its greatest obligations to the State and every effort will be made to further the work of extension teaching. Two great ends are to be subserved by work of this character. First, the systematizing of the educational activities of the State and the raising of these to a higher level of efficiency. Second, the dissemination of useful knowledge which has accumulated in recent years, but is not as generally appreciated as it should be, and which cannot be brought to the attention of adults and those remotely situated from the College save through extension agencies. Recognizing the importance of this character of work, the General Assembly of Georgia during the annual session 1909 appropriated \$10,000.00 to the State College of Agriculture to be used for extension teaching. In accordance with this act a department of agricultural extension has been established by the Board of Trustees. Five men are employed in this work; a director, who is also a specialist in live stock, and experts on schools, agronomy, dairying and horticulture. The regular professors of the College also assist in the work as far as possible, thus placing at the disposal of the farmers of the state a staff of specialists in agriculture and allied subjects. During the year 268 meetings were held, and 53,344 people reached, exclusive of those served through correspondence and by distribution of bulletins. Over 87,944 miles of travel were entailed to render this service, which included the organization of fourteen itinerant schools, attended by 8,415 people; thirty-two farmers institutes, attended by 7,762 people; boys' and girls' clubs in 85 counties, with an aggregate enrollment of 4,997; fourteen Teachers' Institutes, attended by 2,085 teachers; 117 miscellaneous meetings attended by 26,485 people. In addition the

Farmers' Conference at Athens was attended by over 200 people, while about 3,500 people visited the college on the excursions organized through the extension service. These figures do not include any of the data relative to the movement of the Educational Train.

It is believed that one of the most efficient ways by which the farmers can be served is through the organization and promotion of itinerant or traveling schools. Fourteen three-day schools were therefore conducted during the Spring of 1910, at the following places: Lexington, Statesboro, Douglas, Moultrie, Americus, Cordele, Covington, Milledgeville, Carrollton, Wrens, Commerce, Monroe, Gainesville, and Decatur. The average registration was ninety, and the total attendance at the one hundred sessions, 8,415. The response to this work has been most gratifying, and judging from the expressions of those in attendance, it is the most satisfactory method of reaching farmers that has yet been devised. The demand for meetings has been such as to make it clear that the present appropriation will be insufficient to meet the requirements of the work. These schools are conducted in a thoroughly practical manner. Among the topics discussed are the mixing and application of fertilizers, soils and soil cultivation, tillage and tillage implements, the selection and improvement of seed corn and cotton, diseases of live stock, dairying, fruit and truck problems, spraying and orchard management, the feeding and care of live stock. Demonstrations constitute an important feature of these schools. For instance, a clinic is held at which all the sick animals brought in are treated by a competent veterinarian. There are also spraying, dairy and seed testing demonstrations. Charts, models and other materials are carried along and a number of the lectures are illustrated. In this way the subject matter is presented in a graphic and practical manner, so practical indeed that many farmers who have attended the schools found it feasible to put the suggestions made by the instructors into practice with great benefit. The value of a system of extension teaching of this character can never be accurately estimated, but those who have seen the marvelous improvement in farm practice which has followed in the wake of limited effort in this direction realize fully what a systematic extension bureau may accomplish in stimulating an interest in better methods of farming.

Four Fruit and Truck Associations were organized during the year, one each at Athens, Clayton, Macon and Milledgeville.

Another feature emphasized by the extension department is the organization of boys' and girls' industrial clubs. The boys are being encouraged to grow corn under the specific rules and

regulations laid down by the College, and the girls to organize canning clubs and to take a greater interest in cooking and sewing. Wonderful progress is being made this year. Eighty-five counties have been organized as follows, the figures in brackets indicating the number of girls enrolled in the several counties, and show a total of 3,922 boys and 1,075 girls:

Banks, 85 (85); Burke, 15; Campbell, 50; Catoosa, 15; Chattooga, 23; Cherokee, 25; Clarke, 41 (55); Clayton, 20; Cobb 23; Coffee, 35; Colquitt, 95; Columbia, 86; Coweta, 31; Decatur, 16; DeKalb, 113 (126); Dooley, 17; Douglas, 133; Early, 84; Effingham, 11; Elbert, 7; Emanuel, 8; Floyd, 93; Franklin, 25; Gordon, 40; Grady, 35; Greene, 16 (80); Gwinnett, 9; Habersham, 71; Hall, 175; Hancock, 184 (107); Haralson, 74; Hart, 22; Heard, 26; Henry, 25; Irwin, 33 (14); Jackson, 2; Jasper, 44; Jenkins, 21; Jones, 64; Laurens, 235 (281); Liberty, 16; Lowndes, 16; Macon, 37; Madison, 86; McDuffie, 18; Mitchell, 17; Morgan, 20; Murray, 24; Oconee 102; Oglethorpe, 29; Paulding, 111; Pierce, 114; Pike, 30; Polk, 64; Pulaski, 32; Putnam, 92; Randolph, 43; Richmond, 48; Rockdale, 15; Schley, 30; Screven, 74 (55); Stephens, 54; Stewart, 70 (97); Sumter, 20; Taliaferro, 7; Tattall, 55; Thomas, 57 (20); Troupe, 22; Twiggs, 42; Upson, 2; Walker, 45; Walton, 35; Ware, 37; Wayne, 13; Whitfield, 54; Wilcox, 101 (100).

In this work the extension department has had the sympathetic coöperation of the great majority of the county school commissioners, of the Farmers' Union, the State Department of Agriculture, and a number of congressmen. Liberal prizes have been offered by a number of organizations and individuals so that the boys and girls entering these contests will have the privilege of competing for premiums totalling several thousand dollars. Through the organization of these clubs the attention of the boys and girls is being directed to a more thorough appreciation of the possibilities of the soil, the need of using fertilizers and acquiring a consistent knowledge of plant and animal life. In other words, agricultural instruction of a fundamental character is being introduced into the schools of the state and the fact that the boys have often been able to produce 100 bushels of corn per acre where their fathers were contented with 10 to 15, has demonstrated the great cultural and economic value of work of this character.

Another activity to which the extension department directed its attention during the past few months was the organization and operation of a second educational train. This train traveled about 6,000 miles, reached 120 counties and made nearly 160 stops. It was visited by more than 350,000 people who examined

with interest and appreciation the exhibits it carried and listened with the utmost attention to the addresses delivered on soils, fertilizers, crop rotations, and on the various classes of live stock carried by the train. No movement of a similar nature has ever attracted greater interest and it is impossible to estimate the ultimate good it will accomplish for the advancement of Georgia agriculture. It has resulted in an agricultural awakening which is sweeping across the state and no one can portray the beneficial results which it will confer upon the state through the proper endowment and stimulation of agricultural education and research on a basis commensurate with the needs of the times.

The operation of the train was made possible through the co-operation of the following railroads, who furnished the equipment and transported it free of cost: Atlanta & West Point; Atlanta, Birmingham & Atlantic; Atlantic Coast Line; Augusta Southern; Central of Georgia; Georgia; Georgia & Florida; Georgia Southern & Florida; Georgia, Florida & Alabama; Gainesville Midland; Louisville & Nashville; Macon, Dublin & Savannah; Seaboard Air Line; Southern.

The train consisted of seven cars, the first of which was an Arms Palace car for live stock in which were carried a choice pair of draft Percheron mares, a pure-bred Holstein Bull, and a Holstein and a Jersey cow. There were also representatives of two breeds of swine, namely, the Berkshire and Tamworth, a pair of Southdown sheep, and several breeds of poultry. This live stock attracted an unusual amount of attention and was carried for the purpose of emphasizing the necessity of breeding horses and mules at home, eradicating the cattle tick so better types of beef cattle could be maintained, and fostering sheep, swine and poultry husbandry, industries which have been greatly neglected in the State in the past. Something like two million pages of literature were distributed from the train which reached not only the adult population but the boys and girls as well. The success of the movement was made through the coöperation of the various agencies at work in the state and by the great interest evidenced in newer and better methods of farming on the part of the residents of the towns and cities and the rural population as well. The movement of this train represents an epoch in the agricultural progress of Georgia.

Speakers will be sent from the College to address farmers' gatherings or to discuss subjects of special interest to a given community. The officers of the College are working in coöperation with the County School Commissioners, and lecturers will be sent to teachers' institutes for the purpose of discussing ways and means by which instruction in agriculture in the common schools

as provided for by law may be inaugurated. There is no service which can be rendered the people of the State at this time more important than that of fostering the teaching of the underlying principles of agriculture in the public schools. The teachers are not to blame for the apparent neglect of this subject, as there has been no channel through which they might obtain the needed information.

Another feature of extension work which the College is fostering is correspondence with farmers. Thousands of letters are annually answered, giving definite information relative to fertilizers, soils, crops, care and management of live stock, orchards and gardens. Every farmer in the State is invited to take advantage of the free correspondence course now conducted so extensively by the College, for in this way at the cost of a two-cent stamp any individual may obtain information worth a great deal of money to him with the least possible effort, and without the necessity of purchasing expensive books or taking a long trip to acquire the information. The College stands ready through its staff to assist every organization and every individual entitled to its service free of cost. As the College is now in position to organize a number of extension schools for teachers, it is believed that substantial progress may be anticipated.

FARMERS' INSTITUTES.

The Board of Trustees of the University organized a farmers' institute system on January 16, 1903. When the Board of Trustees of the Agricultural College was created the management of the farmers' institutes was transferred to it. For several years the institutes were under the charge of Hon. Harvie Jordan, who, however, found the work so onerous and exacting that he decided to withdraw from it on November 1, 1907, when the work was turned over to the direction of Andrew M. Soule.

Thirty-two Farmers' Institutes were held during the past year at the following places, with a total attendance of 7,762:

Adairsville, Adrian, Barnesville, Cedartown, Clayton, Cochran, Commerce, Cordele, Cumming, Danielsville, Douglas, Dublin, Eatonton, Ellijay, Flowery Branch, Forsyth, Franklin, Hartwell, Idlewild, Jasper, LaFayette, LaGrange, Lincolnton, Lyons, McDonough, Monticello, Moultrie, Rayle, Union City (twice), Valdosta, Waycross.

Institutes were offered to the remaining senatorial districts, but for various reasons satisfactory arrangements could not be made for the meeting.

From one to three speakers were sent to the following places where either farmers' meetings or educational rallies were held;

if more than one meeting was held in a place, the number is indicated in brackets:

Acworth, Ames, Ia., Appling, Atlanta, (13), Arnoldsville, Augusta, Blakely, Blue Ridge (2), Buena Vista, Butler, Calhoun, Cartersville, Cass Station, Cedartown, Chatworth, Clayton (3), Commerce (2), Conyers, Covington, Culverton, Cumming, Cussetta, Dahlonga, Dalton, Danielsville, Dawson, Eatonton, Ellaville, Farmington, Fayetteville, Fifth Dist. Agricultural School, Fort Gaines, Fort Valley, Gainesville, Greensboro (2), Hoganville, Homer, Hoschton, Ingleside, Jefferson (3), Jonesboro, Knoxville, LaFayette (2), Lexington, Live Oak, Lumpkin, Macon (7), Madison, Marietta, Milledgeville, Millen, Monroe (2), Moultrie, Mt. Arrarat, Newnan, New Salem, Perry, Portsmouth, N. H., Rayle, Richland, Ringgold, Rome (2), Savannah, Sparta, Springfield, Summerville, Sylvania, Sylvester, Tifton, Thomas, Thomasville, Union City (2), Union Hill, Valdosta (2), Vienna, Watkinsville, Washington, D. C. (2), White, Whitehall.

Fourteen Teachers' Institutes were held during the year, with a total attendance of 2,085. Institutes were held at the following places: Canton, Cartersville (3 days), Dallas, Elberton, Glennville, Irwinton (3 days), Jeffersonville (3 days), Jesup (3 days), Lawrenceville, Lumpkin, Millen, Summerville (3 days), Toccoa.

The work of the past year was more successful than ever before. An agricultural awakening is sweeping over Georgia, and if the increase in enthusiasm is as great in 1911 as it was in 1910, a larger sum of money must be appropriated by the State or institutes can not be held in many communities seeking them.

It is a pleasure to acknowledge the cordial coöperation and support extended to the institute work by leading citizens in every section where representatives of the College went; but for their assistance as well as that of the local press the meetings would not have been successfully organized. The list of meetings as enumerated above does not include a large number of points visited by representatives of the College to address, for instance, meetings of the Farmers' Union, and other organizations of agricultural workers.

Representatives will gladly be sent to meetings of any organizations which have the welfare of the farmer at heart, and are endeavoring to disseminate information which will enable him to conduct his operations more successfully. A list of the institute officers follows:

| Dist. | President. | County. | Postoffice. |
|-------|---------------|-----------|-------------|
| 1st | Wm. Cannet | Effingham | Tusculum |
| 2nd | W. F. Peacock | Toombs | Vidalia |
| 3rd | Ben Milliken | Wayne | Jesup |

| Dist. | President. | County. | Postoffice. |
|-------|---------------------|------------|---------------|
| 4th | D. P. Rose | Camden | Owens Ferry |
| 5th | J. E. W. Smith | Ware | Waycross |
| 6th | Judge O. M. Smith. | Lowndes | Valdosta |
| 7th | W. W. Rast | Brooks | Pidcock |
| 8th | C. S. Hodges | Decatur | Cyrene |
| 9th | D. W. James | Early | Blakely |
| 10th | W. W. Monk | Worth | Poulan |
| 11th | W. D. Hammock | Randolph | Coleman |
| 12th | W. S. Boyett | Stewart | Lumpkin |
| 13th | R. E. L. Eason | Schley | Ellaville |
| 14th | J. W. Bivins | Crisp | Cordele |
| 15th | W. A. Clark | Telfair | Jacksonville |
| 16th | E. L. Harris | Johnson | Kite |
| 17th | A. M. Deal | Bulloch | Statesboro |
| 18th | A. H. Rooks | Richmond | Blythe |
| 19th | J. W. Farmer | Taliaferro | Crawfordville |
| 20th | R. N. Lamar | Baldwin | Milledgeville |
| 21st | John T. Williams | Jones | Haddock |
| 22nd | Thos. G. Scott | Monroe | Forsyth |
| 23rd | J. W. Cheek | Houston | Perry |
| 24th | B. T. Peacock | Marion | Buena Vista |
| 25th | Capt. J. F. Jenkins | Harris | Chipley |
| 26th | J. G. Minter | Fayette | Fayetteville |
| 27th | J. P. Mitchell | Walker | Social Circle |
| 28th | Dr. J. P. Weaver | Putnam | Eatonton |
| 29th | E. A. Callaway | Wilkes | Rayle |
| 30th | W. S. Sanders | Madison | Danielsville |
| 31st | A. J. McMullan | Hart | Hartwell |
| 32nd | R. H. Baker | Lumpkin | Dahlonega |
| 33rd | L. G. Hardman | Jackson | Commerce |
| 34th | T. A. Pate | Gwinnett | Snellville |
| 35th | F. J. Merriam | Fulton | Atlanta |
| 36th | A. J. Snelson | Meriwether | Bullochville |
| 37th | W. M. Longley | Troupe | LaGrange |
| 38th | J. E. Houseal | Polk | Cedartown |
| 39th | E. P. Tribble | Forsyth | Cumming |
| 40th | J. V. Arrendale | Rabun | Clayton |
| 41st | E. Wofford | Pickens | Talking Rock |
| 42nd | Dr. J. W. Bowden | Bartow | Adairsville |
| 43rd | E. C. Anderson | Gordon | Lilly Pond |
| 44th | J. T. Suttle | Walker | Greenbush |

Those senatorial districts interested in securing a meeting for 1911 should correspond with the College at the earliest possible date, so that arrangements may be made for the meetings some time in advance. The appropriation for holding institutes is very small, and as the work has to be done by a few men, it is necessary to prepare a schedule of meetings in advance, so as to save money and conserve the time of the instructors. Correspondence with reference to institutes is invited. If the farmers will coöperate with the College the best work ever done through this arm of the extension service can be accomplished during the

year 1911. A printed report containing the principal papers presented during the Farmers' Conference is now being prepared and will be mailed free to any citizen in the State. It contains more than 200 pages, and some excellent papers on agricultural practice in Georgia. Every progressive farmer should have a copy of this report.

For further information, write the

GEORGIA STATE COLLEGE OF AGRICULTURE,

University of Georgia,

Athens, Ga.

REGISTER OF STUDENTS---1910-1911

MASTER OF SCIENCE IN AGRICULTURE.

| | |
|------------------------------|---------|
| Dobbs, William Franklin..... | Athens. |
| Moore, Henry Walter..... | Athens. |

BACHELOR OF SCIENCE IN AGRICULTURE.

Senior.

| | |
|-------------------------------|-----------------|
| Baker, Eugene | Hartwell. |
| Miller, Julian Howell | Athens. |
| McLemore, Chester Horace..... | Mt. Vernon. |
| Rast, Loy Edmund | Pidcock. |
| Rice, George Erskine | Flowery Branch. |
| Whatley, William Fred | Helena. |

Junior.

| | |
|----------------------------------|--------------|
| Acree, Walter Green | Resaca. |
| Brinson, Benjamin Lewis | Stillmore. |
| Childs, Ross Renfroe | Round Oak. |
| Gay, Milton Cleveland | Ball Ground. |
| Holley, Nathaniel Edward | Ft. Gaines. |
| Hutcheson, Robert Oliver | Atlanta. |
| Middlebrooks, Junius Ralph | Mayfield. |
| Scott, John Irwin | Decatur. |
| Suddath, Robert O'Neal | Maysville. |
| Whelchel, Robert Fred | Murrayville. |
| Wray, Charles Birch | Cedartown. |

Sophomore.

| | |
|--------------------------------|-----------------|
| Asbury, Thomas Lyne | Crawfordville. |
| Ballard, Robert Lee | Forest Park. |
| Boyett, William Jack | Morris Station. |
| Bryant, Clarence Avery | Royston. |
| Campbell, John Philander | Athens. |
| Chiu, Chin | Honolulu. |
| Corley, Otis Herman | Athens. |
| Garrison, Frank Davis | Cornelia. |
| Ginn, Stark Flavor | Royston. |
| Howard, Robert Powell | Barnesville. |
| Hurst, William Herbert | Social Circle. |
| Kerlin, James Howard | Fayetteville. |
| Liddell, Julian Gordon | Atlanta. |

| | |
|--------------------------------|------------------|
| Newton, Walker Lowrance | Madison. |
| Suddath, Aubrey Whelchel | Maysville. |
| Watson, Luther Stephens | Loganville. |
| Williams, John Benjamin | Ft. Valley. |
| Wilson, Wilber Radford | Hillsdale, Mich. |
| Woodruff, Joseph Grady | Winder. |
| York, Gus | Quartz. |
| Young, John Law | Canton, China. |

Freshman.

| | |
|----------------------------------|-------------------|
| Austin, Wong Ting | Wong Ajaw, China. |
| Bazemore, Henry Franklin | Sylvania. |
| Bowden, David Timon | McDonough. |
| Culpepper, Clarence Boozer | Luthersville. |
| Campbell, Harold Joseph | Lithonia. |
| Davis, Jefferson Irwin | Quitman. |
| Davis, Joel Joseph | Tifton. |
| Davis, Jesse Walters | Macon. |
| Denmark, Thomas Irving | Valdosta. |
| Dillard, Edward Carlton | Arnoldsville. |
| Gillis, James Lester | Soperton. |
| Harp, Sam Bentley | Reynolds. |
| Hillis, Minis Stanton | Girard. |
| Hwang, Hsung-tung | Hangkon, China. |
| Johnson, James Augustua, | Barwick. |
| Loyd, DeWitt Wilson | Newborn. |
| McClelland, William Fred | Freeville, N. Y. |
| McNabb, Malcolm | Norcross. |
| Nanney, William Clyde | Brunswick. |
| Odom, James Garnett | Girard. |
| O'Kelley, Edward Barbara | Gainesville. |
| Rowland, Hampton | Athens. |
| Settle, Paul Thomas | Norcross. |
| Tabor, Paul | Danielsville. |
| Taylor, Lamar Aldred | Davisboro. |
| Westbrook, Edison Collins | Gainesville. |
| Wier, VanNoy | Athens. |
| Williams, George Smith | Statesboro. |
| Wimberly, Olin John | Macon. |

BACHELOR OF SCIENCE IN FORESTRY.

| | |
|--------------------------------|-----------------|
| Buchwald, Chas. | Brooklyn, N. Y. |
| Cooper, Marion Burnside | Augusta. |
| Kollock, Josiah Tattnall | Atlanta. |
| Ransom, Elmer Inglesby | Augusta. |

SPECIAL STUDENTS IN AGRICULTURE.

| | |
|----------------------------------|--------------|
| Braswell, Albert Monroe | Gainesville. |
| Foster, Robert Claude | Monroe. |
| Galloway, Henderson Hunter | Atlanta. |
| Morton, Tunis | Athens. |
| Stone, Bonnell Harold | Oxford. |
| Swift, Thomas Madison, Jr..... | Elberton. |
| Tolleson, Joseph Mead | Monticello. |

ONE-YEAR COURSE IN AGRICULTURE.

| | |
|-----------------------------------|-----------------|
| Athon, Cincle Davis | Machen. |
| Bargerion, John Jones | Waynesboro. |
| Blake, John Dullam | Rockford, Ill. |
| Bohannon, Willie Dooley | Newnan. |
| Bowen, Grady | Bowman. |
| Breedlove, Thomas Richard | Monroe |
| Brock, Hubert Bachman..... | Athens |
| Burnett, Osea Harris..... | Towns |
| Byrd, Thomas Jefferson | Broxton |
| Eager, C. Anville..... | Baltimore, Md. |
| Fears, Grady Franklin | Hampton. |
| Freeman, Thomas Cleaveland..... | Commerce |
| Gibson, Thomas Burton..... | Athens |
| Greenway, Ollis Edmund..... | Gillsville |
| Harper, John Gary..... | Anderson, S. C. |
| Harris, Paul Thomas..... | Saltillo, Miss. |
| Holmstrom, Russell Haynes | Brooklyn, N. Y. |
| Inghram, William Lee | Barney. |
| Little, Bird | Duluth. |
| Martin, Benjamin Edward | Athens. |
| Paschal, Ambrose Hutchinson | Nona. |
| Stewart, Jeff Davis | James. |
| Turk, Joseph Lee | Homer. |
| Ward, Thomas Marion | Elberton. |
| Whelchel, Benj. Terry | Ashburn. |
| Yoder, Kirk McRoy | Van Wyck, S. C. |

THE COTTON GRADING SCHOOL.

| | |
|--------------------------------|--------------|
| Anderson, Thomas Graves | Athens. |
| Booth, John Carl | Athens. |
| Gardner, George Lawrence | Calhoun. |
| Gay, Benjamin Franklin | Ball Ground. |
| Hale, Eugene Greeley | Fitzgerald. |
| Hassell, William Addison | Quitman. |
| Jordan, William Carl | Tennille. |

THE COTTON SCHOOL AND STOCKMAN'S SHORT COURSE.

| | |
|--------------------------|--------------------|
| Acree, Robert Franklin | Resaca. |
| Allison, L. Herscher | Summer. |
| Athon, George T. | Machen. |
| Ballinger, L. L. | Homer. |
| Bargerion, T. T. | Augusta. |
| Born, Henry | Newnan. |
| Brock, Chas H. | Commerce. |
| Burns, Egbert T. | Jefferson. |
| Chapman, O. T. | Jeffersonville. |
| Cooper, T. T. | Hoschton. |
| Council, W. B. | Americus. |
| Culpepper, Brooks | Talbotton. |
| Dean, S. S. | Rome. |
| DeJarnette, H. R. | Eatonton. |
| Etheridge, William M. | Auburn. |
| Gloright, Arthur | Athens. |
| Groover, J. T. | Pidcock. |
| Hacket, Chas. Turner | Purcell, Okla. |
| Hardaway, Miss Ruth | Newnan. |
| Head, T. C. | Pendergrass. |
| Henley, J. A. | Danielsville. |
| Henley, Paul M. | Danielsville. |
| Jackson, J. F. | Savannah. |
| Kenney, Chas. H. | Athens. |
| Lassater, W. C. | Fayetteville, Ark. |
| Martin, G. S. | Athens. |
| Maxwell, L. T. | Commerce. |
| McElheny, Blanton E. | Gladisville. |
| McElroy, George W. | Athens. |
| McGee, Joseph B. | Athens. |
| McIntyre, J. B. | Carnesville. |
| McMullan, L. L. | Hartwell. |
| Neal, Robert E. | Thomson. |
| Nelson, Chas. P. | Calhoun. |
| Pendergrass, John Howard | Commerce. |
| Quitman, A. Smith | Blackshear. |
| Rice, John M. | Flowery Branch. |
| Sell, L. F. | Houston. |
| Sharp, Boles | Sunset. |
| Sibley, J. Hart | Union Point. |
| Smith, English | Dublin. |
| Smith, Harvey M. | Atlanta. |
| Spratling, Walter | Hull. |
| Stephenson, M. M. | Athens. |

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|----------------------------|---------------|
| Stewart, H. Bartley | Summer. |
| Taylor, J. W. | Birmingham. |
| Taylor, Lucius H. | Gabbettville. |
| Thurman, Luther B. | Athens. |
| Trawick, Jesse T. | Linton. |
| Tucker, Wm. R. | Summerville. |
| Turner, Curtis Lewis | Smyrna. |
| Vance, E. W. | Buford. |
| Wright, W. C. | Eatonton. |
| Yearwood, Yuill | Athens. |
| Young, Harold A. | Eatonton. |

STUDENTS TAKING SHORT COURSES IN FORESTRY.

| | |
|----------------------------------|-------------------|
| Allen, Reuben Winfield | Thomaston. |
| Anderson, Paul Randolph | Barnesville. |
| Arnold, George Clifton | Elberton. |
| Arnold, Robert Stanford | Newnan. |
| Baker, Eugene | Hartwell. |
| Bartlett, Paul LaFayette | Dallas. |
| Brock, Pope Furman | Carnesville. |
| Cheney, Patrick Mell | Valdosta. |
| Dallis, Render | LaGrange. |
| Dancey, William Grimes | Atlanta. |
| Dickinson, Alfred | Gainesville, Fla. |
| Fielder, Thomas Herbert | Cedartown. |
| Flanigen, Cameron Douglas | Athens. |
| Forbes, Tillou Henderson | College Park. |
| Fort, William Ellis | Athens. |
| Foster, James Holmes | Monroe. |
| Fraser, Young Harris | Augusta. |
| Griffin, William Hunt .?..... | Greenville, Miss. |
| Griffith, Roy | Bogart. |
| Hatch, William Gow | Augusta. |
| Harris, Eustace Vivian | Bethlehem. |
| Hill, Walter Barnard | Athens. |
| Horn, Daniel Alexander | Boston. |
| Jones, James Paul | Rome. |
| Kirby, Wallace Myers | Brooklyn, N. Y. |
| Laird, Robert Alexander | Savannah. |
| Lanham, Henderson Lovelace | Rome. |
| Lucas, Walter Malry | Waverly Hall. |
| Maddox, Arthur Kenney | Griffin. |
| Marshburn, Joseph Hancock | Waycross. |
| Miller, Eralbert Talmadge | Columbus. |
| Miller, Julian Howell | Athens. |

| | |
|----------------------------------|--------------|
| Moise, Edwin Warren | Savannah. |
| Osborne, George Grady | Atlanta. |
| Peacock, Howell Benajah | Columbus. |
| Pennington, Edgar Lagare | Madison. |
| Pina, Francis Xavier | Cuba. |
| Powell, John Roundtree | Statesboro. |
| Riddell, Herman Ellis | Atlanta. |
| Roberts, Benjamin Emmett | LaGrange. |
| Rogers, H. T. | |
| Rogers, William H. S. | Athens. |
| Russell, David Augustine | Carrollton. |
| Slaton, James Jackson | Atlanta. |
| Small, Corbin Cox | Macon. |
| Solomons, Joseph Middle | Savannah. |
| Thurman, John Gordon | Barnesville. |
| Tolnas, John Olaf | Brunswick. |
| Troutman, Robert Battey | Athens. |
| Turpin, William Conard | Macon. |
| Watson, John Hugh | Dallas. |
| Whatley, William Fred | Helena. |
| Whelchel, Frederick Cooper | Comer. |
| Wilson, Joseph Russell | Corsica, Pa. |
| Witman, Magnus Jacobson | Macon. |
| Wright, Boykin Cabell | Augusta. |

SUMMARY OF REGISTRATION, 1910-1911.

COLLEGE OF AGRICULTURE.

| | |
|---|-----|
| M. S. in Agriculture | 2 |
| B. S. in Agriculture | 67 |
| B. S. in Forestry | 4 |
| Special Students in Agriculture | 7 |
| One-Year Course in Agriculture | 28 |
| Cotton Grading School | 7 |
| Cotton School and Breeders' Short Course | 55 |
| Students Taking Short Courses in Forestry | 56 |
| <hr/> | |
| Grand Total | 226 |
| Counted twice | 3 |
| <hr/> | |
| Total Registration | 223 |



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